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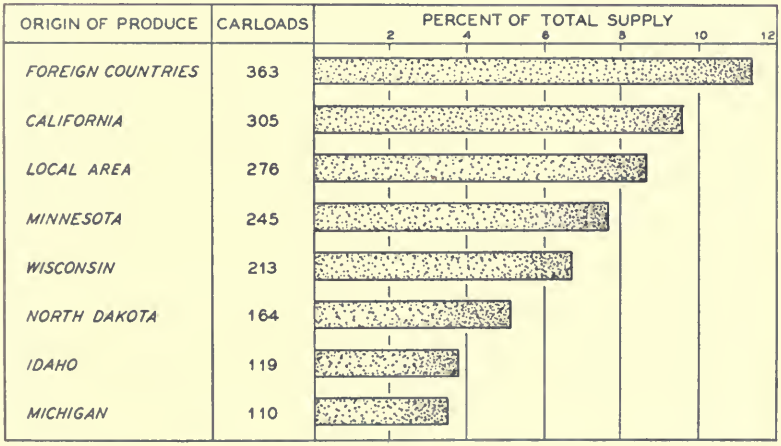
The Market for Fresh Fruits and Vegetables In Peoria

By S. W. DECKER and
J. W. LLOYD



Local growers are the third most important source of produce for the Peoria market

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Urbana, Illinois June, 1937

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The Market for Fresh Fruits and Vegetables in Peoria

By S. W. Decker and J. W. Lloyd[1]

RAPIDLY CHANGING conditions in the vegetable industry of the country in recent years have greatly complicated the marketing problems of the old established market-gardening industries about our larger cities. These industries were originally developed to supply a large variety of vegetables to local industrial centers at a time when economical production was not of prime importance. Improved methods of transportation, the further development of refrigeration services, precooling, and special treatment of specific products have in recent years made it possible for distant producing regions to place on our local markets fresh produce in first-class condition in competition with local produce. Hard roads enable trucks to move produce from southern regions to northern markets quickly and economically. Also, these improved highways enable operators of farms in nearby areas, with land suitable for the production of certain crops, to compete effectively upon the local market with the old established market gardeners.

In order to have a basis for dealing with some of the problems which the changing conditions just outlined have created, a survey was made of the Peoria, Illinois, fresh fruit and vegetable market. Since the problems facing all vegetable growers around Illinois cities are of the same general nature, it seemed advisable to concentrate upon one market and to make a detailed study of the marketing problems within that one area. Peoria was chosen because it represents one of the larger industrial centers of the state outside of Chicago.

The data were collected chiefly in 1935 by representatives of the Agricultural Experiment Station. A few additional facts were obtained for 1936. Interviews were held with a large number of consumers in different districts of the city; the origin and the disposal of different varieties of produce entering the market were studied; detailed information was obtained from a considerable number of retail stores of different types in the city; operations on the local public market were checked carefully; surveys were made of the vegetables used by a typical group of eating places in the city and of the operations of various wholesale produce dealers in the area.

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[1]S. W. Decker, Associate in Fruit and Vegetable Marketing, and J. W. Lloyd, Chief in Fruit and Vegetable Marketing.

Vegetable-Producing Areas of the State

Altho every county in Illinois produces vegetables commercially, the importance of the industry varies greatly from county to county. The location of the twenty leading vegetable-producing counties is shown in Fig. 1. These include counties which produce vegetables for

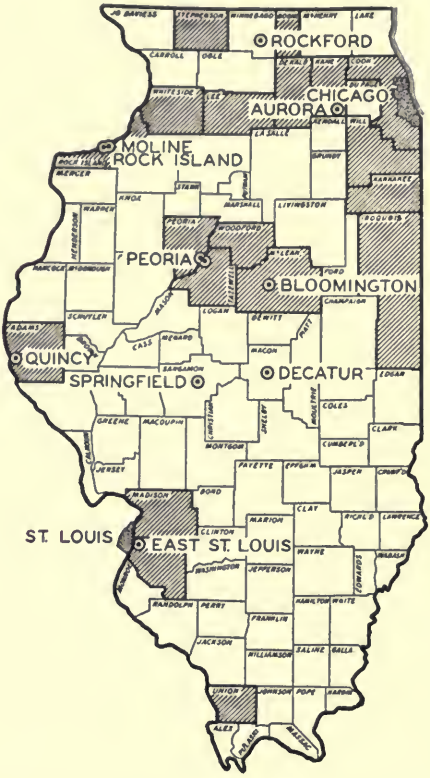

FIG. 1.—TWENTY LEADING VEGETABLE-PRODUCING COUNTIES AND ELEVEN LEADING CONSUMING MARKETS IN ILLINOIS, 1929

The major vegetable areas of Illinois are near cities or are located where cannery crops can be produced to advantage. The Peoria vegetable-producing area includes three counties: Peoria, Tazewell, and Woodford. Canning crops as well as truck crops are produced in these three counties.

canneries as well as for sale in the fresh state. Union county is the only one of these twenty counties that produces any volume of fresh vegetables for a distant market. Stephenson, Boone, DeKalb, Lee, Iroquois, and Vermilion counties produce cannery crops. Altho the

other counties may produce some cannery crops, each has also a large local market for fresh vegetables, as shown by the location of the principal population and market centers in Illinois (Fig. 1).

Increase in Vegetable Acreage

The acreage devoted to vegetable crops in Illinois more than doubled during the decade from 1919 to 1929 (Table 1). The acreage of the vegetable crops commonly used for commercial canning increased by 138 percent, while those crops marketed only as fresh

TABLE 1.—ACREAGE DEVOTED TO COMMERCIAL VEGETABLE CROPS IN ILLINOIS AND IN THE PEORIA AREA[a]

	Total acreage			Canning crops			Fresh vegetable crops		
	1919	1929	Percent increase	1919	1929	Percent increase	1919	1929	Percent increase
Illinois	59 042	118 597	101	34 792	82 804	138	24 250	35 793	48
Peoria area	5 293	11 506	117	4 552	9 905	118	741	1 601	116
Peoria county	983	2 573	162	686	1 799	162	297	774	161
Tazewell county	2 640	5 269	100	2 440	4 954	103	200	315	58
Woodford county	1 670	3 664	119	1 426	3 152	121	244	512	110

[a]Data from U. S. Census of Agriculture, 1920 and 1930.

produce increased by only 48 percent. There were, however, marked and important shifts in the production of fresh produce within the different areas of the state.

Vegetable acreage in the Peoria area (that is, Peoria, Tazewell, and Woodford counties) increased by 117 percent from 1919 to 1929. The increase was equally rapid for the crops marketed only as fresh produce as for those canned commercially. In Peoria county the acreage of crops grown for the fresh-produce market increased by 161 percent, while in Woodford county similar crops increased by 110 percent and in Tazewell county by 58 percent. During this same period the amount and variety of fresh produce shipped into the Peoria market from distant producing regions increased rapidly. During this period the population of Peoria increased 35 percent and the per-capita consumption of fresh produce probably increased due to changing food habits.

From 1929 to 1935 the acreage in vegetable crops in Illinois further increased by 24 percent, and the acreage for the Peoria area increased by 23 percent. In Peoria county, however, the acreage decreased by 24 percent, while in Tazewell county it increased by 7 percent and in Woodford county by 79 percent. The figures as reported do not

permit separation of canning and truck crops. It is quite likely that a considerable part of the increase in Woodford county consisted of canning crops. Low prices for field crops stimulated production of vegetables in a general crop area like Woodford county at a time when the regular vegetable growers in Peoria county were reducing their acreages.

Effect of the Depression and Recovery

The amount of industrial payrolls has a very direct effect upon the market for fresh produce in an area. In all the principal Illinois markets industrial payrolls dropped sharply during the depression (Fig. 2), and for the first time local vegetable gardeners fully realized

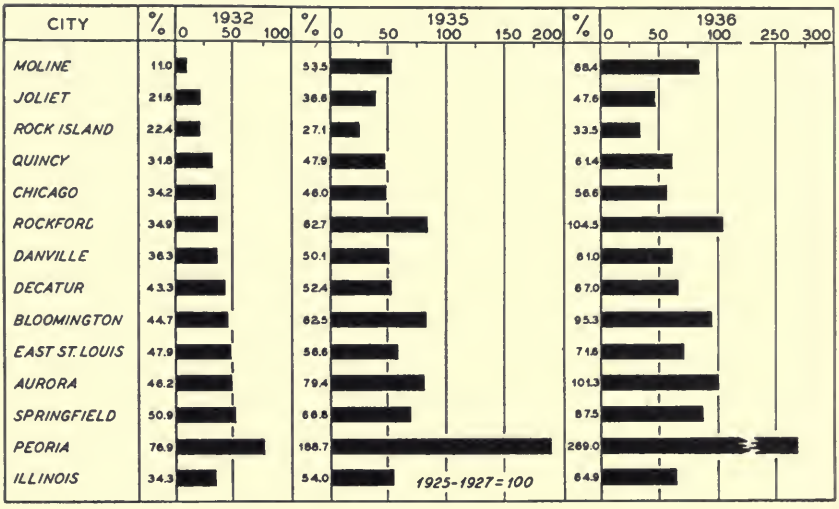

FIG. 2.—FACTORY PAYROLLS IN PRINCIPAL ILLINOIS INDUSTRIAL CENTERS, FOR DESIGNATED YEARS

In 1935 and 1936 Peoria was one of the most active industrial centers in Illinois. This should be reflected in a better local market for fruits and vegetables.

the significance of the competitive influence of produce from distant points. For some time prior to the depression the distant producing areas had been establishing themselves upon the Illinois markets by high quality and standardized packs. These factors, along with improved methods of transportation, made it possible for them to place fresh produce upon Illinois markets in first-class condition. During this same period the local producers were unconsciously catering to

local buyers whose first consideration was a low price and not high quality and standardized packs. These price buyers were largely those individuals who were feeling the pressure of chain-store competition. As depression conditions continued, and as the volume of business done by the chain stores increased in proportion to the volume of the independent stores, the local producers found it increasingly difficult to dispose of their produce at a profit.

The industrial payrolls for the state as a whole during 1935 were only 54 percent of the 1925-1927 average. However, the payrolls for the individual industrial centers varied greatly (Fig. 2). Rock Island was low, with a payroll of 27 percent; while Peoria was high, with a payroll of 189 percent. In 1936 the Peoria payroll had increased to 269 percent of 1925-1927. Increased payrolls in a market area will be of greatest benefit to those sellers who are in position to supply standardized produce of good quality, of less value to those sellers who cater to price buyers and who have failed to grade and standardize their packs.

The wide distribution of fresh-fruit and vegetable production and improved transportation enable many production regions to compete on a given market. This means that when payrolls increase in an industrial center, the improved market conditions resulting therefrom will attract a large amount of produce from distant regions, with the result that the local growers, with their unstandardized grades and packs, may not be benefited by the improved conditions as much as they might anticipate.

Peoria as a Market[1]

The population of the city of Peoria in 1930 was 105,000. The city has a retail area with a radius of 37 miles, which in 1930 had a population of 250,000, and has a wholesale area with a radius of 60 miles, which in 1930 had a population of 740,000.

Thirteen railroads converge at Peoria, and unusually adequate terminal facilities give the city excellent transportation service. Peoria is a rate-breaking point and is one of the main gateways for thru east-and-west traffic.

Fourteen paved highways, including four ocean-to-ocean routes, make truck service available between Peoria and surrounding territory. The Illinois river furnishes transportation by water and adds to the industrial importance of the city.

Peoria is primarily an industrial and distributing center. Over 270 manufacturing establishments making a large variety of products are

[1]Data obtained from Poke's Directory for the city.

located here. In 1935 there were thirteen wholesale dealers in fresh fruits and vegetables, one national chain-store distributing warehouse, three local chain-store warehouses, and a wholesale market for local fresh produce located in Peoria to supply the retail outlets with fresh produce. The wholesale establishments served an area with a radius of 60 miles; the national chain warehouse served a much larger area.

In 1935 the Peoria consumers were being served by 416 retail stores selling fruits and vegetables, a few open-air markets, and 238 establishments serving meals to the general public.

Local fruits and vegetables may pass thru any one of the wholesale establishments to the retail outlets, or local producers may sell directly to retail stores and eating establishments.

WHOLESALE FRUIT AND VEGETABLE MARKETS IN PEORIA

Character of Wholesale Establishments

The nature of the business of the thirteen wholesale establishments in Peoria dealing in fresh fruits and vegetables varied considerably in 1935, especially as to methods of purchasing produce and in the areas over which they sold. A number of the establishments relied largely upon truck transportation for their produce, while others depended upon carlot receipts for their main supply of produce and used truck transportation only to supplement the main stock. Still others used the two methods intermittently according to market conditions and with regard to the kind of produce in question.

The dealers relying upon truck transportation frequently owned trucks to transport the produce from outside producing areas or from other markets to their establishments. Frequently the proprietor was in the field doing the buying while others took care of the selling; thus buying was often the foundation of the business. Their customers were largely local merchants and peddlers of the shopper type, which means that they were price buyers and could not be counted upon as regular customers. Those dealers who purchased largely in carlots usually had a larger number of regular customers distributed over the Peoria wholesale area. The produce obtained by truck to supplement the carlot shipments was usually transported by common carriers.

Carlots Unloaded in Peoria

During the calendar year 1935, 2,605 carloads of fresh fruits and vegetables were unloaded in Peoria, of which 1,497 were vegetables, including potatoes, 900 were fruit, and 208 cars were mixed fruits and

TABLE 2.—CARLOADS OF PRODUCE UNLOADED IN PEORIA, ILLINOIS, BY MONTHS, 1935

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Fruits													
Apples[a]	7	5	4	3	..	1	..	..	11	50	5	2	88
Apples, storage	..	..	..	..	..	..	..	..	7	20	..	..	27
Apples, cider	..	..	..	..	..	..	..	..	51	76	..	..	127
Bananas	25	24	32	41	29	37	33	32	30	29	14	26	352
Cranberries	..	..	..	..	..	..	..	..	..	3	2	..	5
Grapefruit	8	6	7	8	4	..	..	..	1	6	9	7	56
Grapes	..	..	..	..	..	..	..	2	6	8	2	..	18
Grapes, juice	..	..	..	..	..	..	..	..	..	12	..	..	12
Lemons	1	1	2	..	3	1	4	3	..	1	..	..	16
Mixed citrus	1	3	1	..	..	1	..	..	..	..	..	..	6
Oranges	11	20	17	8	10	12	7	8	5	8	10	18	134
Peaches	..	..	..	..	..	..	24	5	..	..	..	..	29
Pears	..	..	..	..	..	..	..	1	1	..	..	..	2
Plums and prunes	..	..	..	..	1	..	..	1	2	4	..	..	8
Pineapples	..	..	..	..	10	1	..	..	..	..	..	..	11
Strawberries	1	..	5	2	..	..	..	..	..	..	..	..	8
Tangerines	..	1	..	..	..	..	..	..	..	..	..	..	1
Vegetables													
Beans	..	1	..	2	..	..	1	..	..	..	..	..	4
Cabbage	13	7	4	1	5	..	..	1	9	23	4	9	76
Cantaloups	..	..	..	1	..	6	17	1	1	..	..	..	26
Carrots	1	2	1	3	3	1	..	..	..	..	..	2	13
Cauliflower	2	1	1	2	..	..	..	..	..	..	1	1	8
Celery	1	3	4	2	2	1	..	1	..	1	2	1	18
Cucumbers	..	..	..	..	1	..	..	1	..	..	..	..	2
Lettuce	14	17	16	15	16	8	7	6	6	8	11	15	139
Onions	11	3	1	2	3	5	3	7	14	8	8	4	69
Peas	..	..	..	1	2	..	..	1	..	..	..	..	4
Potatoes	67	72	67	80	84	114	85	92	95	157	73	38	1 024
Radishes	..	..	..	1	..	..	..	..	..	..	..	..	1
Rutabagas	..	..	..	..	..	..	..	..	..	..	1	..	1
Spinach	..	..	..	..	..	..	1	..	..	..	..	..	1
Sweet potatoes	1	1	..	..	..	..	..	..	2	3	..	1	8
Tomatoes	..	..	..	6	4	11	6	2	..	..	..	..	29
Turnips	..	..	..	..	..	..	..	..	..	1	..	..	1
Watermelons	..	..	..	..	..	22	43	8	..	..	..	..	73
Mixed fruits and vegetables	21	20	24	26	29	17	11	13	18	11	8	10	208
Total	185	187	186	204	206	238	242	185	259	429	150	134	2 605

[a]For immediate consumption.

vegetables (Table 2). Potatoes, bananas, and lettuce were received more uniformly thruout the year than were the other products.

Out of a total of 242 carloads of apples received, 127 carloads were used for cider and vinegar, and 27 carloads went into storage and entered the retail channels later in the season.

There were 352 carloads of bananas received, these constituting more than 40 percent of the total carloads of fruit unloaded in Peoria. There were 213 carloads of citrus fruits, making up about one-fourth of the total fruit unloaded. Eleven carloads of pineapples were unloaded. The balance, consisting of 316 carloads, or about one-third of the total, was deciduous and other fruits.

It must be recognized, however, that the total supplies of bananas, citrus fruits, and pineapples were represented in the carload receipts, while a fair percentage of the deciduous and other fruits were placed upon the Peoria market by truck. A few years ago strawberries, for

example, were commonly shipped to Peoria in carloads. In 1928 there were 68 carloads of strawberries unloaded in Peoria, in 1934 only 12 carloads were unloaded, and in 1935 only 8 were received by rail. The truck has taken over the transportation of this commodity. Cheapness and rapidity of service, along with the ability to furnish a fresh daily supply, have caused this shift in method of transportation.

TABLE 3.—ESTIMATED TRUCK RECEIPTS AT PEORIA FROM OUTSIDE PRODUCING AREAS, ESTIMATED LOCAL PRODUCTION AND INDEX OF ITS IMPORTANCE, AND TOTAL RECEIPTS, 1935 SEASON

	Carload equivalents			Index of local production[b]
	Truck receipts	Local produce	Total receipts[a]	
Apples	68	4	187[c]	10
Asparagus	1	2	3	100
Bananas	0	0	352	0
Beans	12	15	31	95[d]
Beets	2	4	6	90
Blackberries	13	4	17	50[e]
Cabbage	6	12	94	60[f]
Cantaloups	8	34	68	100[g,h]
Carrots	15	3	31	20
Cauliflower	4	3	15	90[g]
Celery	5	1	24	20
Corn (green)	1	12	13	100
Cranberries	1	0	6	0
Cucumbers[i]	3	4	9	90
Eggplant	0	1	1	100
Grapefruit	4	0	60	0
Grapes	12	8	38	75[j]
Greens[k]	0	2	2	100
Honeydew melons	6	0	6	0
Lemons	3	0	19	0
Lettuce, head	27	0	166	0
Lettuce, leaf	1	6	7	95
Mixed citrus	0	0	6	0
Mixed fruits and vegetables	0	0	208	0
Onions, green	1	4	5	100
Onions, dry	5	2	76	10
Oranges	10	0	144	0
Parsnips	0	2	2	100
Peaches	64	1	94	20
Peas	10	3	17	50
Pears and plums	3	1	14	10
Pineapples	0	0	11	0
Potatoes	0	3	1 027	1
Potatoes, sweet	15	10	33	80
Peppers[l]	1	2	3	100
Raspberries	30	5	35	50[e]
Radishes	2	3	6	75[g]
Rutabagas	0	0	1	0
Strawberries	96	7	111	50[e]
Spinach	2	12	15	100
Tangerines	0	0	1	0
Tomatoes	16	50	95	95
Turnips	0	2	3	100
Watermelons	2	50	125	100
Miscellaneous vegetables[m]	10	4	14	100
Total	459	276	3 201	

[a]Includes rail receipts consumed as fresh produce (Table 2), as well as truck receipts and local produce. [b]Represents estimated percentage that local production made up of the total supply during the season when local produce was available. [c]Exclusive of cider apples. [d]100 percent except for drouth periods. [e]When local berries come in, No. 2 berries are trucked in. Later, No. 1 berries come in from Michigan. [f]Receipts heavy in fall for kraut purposes. [g]Quality and quantity of crop uncertain because of weather conditions. [h]Supply too great for local market. [i]Includes all sizes of pickles. [j]Exclusive of European varieties. [k]Includes mustard, dandelion, and turnip greens. [l]Includes all kinds of peppers. [m]Includes produce used in small quantities, such as dill, summer squash, artichokes, etc.

Estimated Receipts by Truck

It is estimated that in addition to the fruits and vegetables received by rail, the equivalent of 459 carloads was received by truck from distant points and the equivalent of 276 carloads of local produce was sold on the Peoria market during 1935 (Table 3). Most of the truck receipts from a distance were brought into the market by dealers. Some of the produce such as apples, peaches, onions, and sweet potatoes, the truckers secured directly from the producer, while other products, such as head lettuce and oranges, were obtained upon other markets and brought to Peoria during times of rapid drop in prices.

During the season of 1935 the city of Peoria made effective an old ordinance compelling all truckers dealing in fresh produce to secure licenses from the city. A fee of $100 was charged, and this gave the trucker access to the city for the period of a year. This fee greatly reduced the number of transient truckers that might have used Peoria as a market and therefore reduced the amount of trucked-in produce. The tendency, however, has been for the established wholesale dealers to use trucks more and more as a method of getting a supply of produce from distant regions, particularly items which cannot be used in carload lots.

OUTSIDE SOURCES OF FRESH PRODUCE

The carloads of fresh produce unloaded for the Peoria market during the calendar year 1935, originated in foreign countries and in thirty-seven states (Table 4). Foreign countries (sources of bananas and pineapples) led the list with a total of 363 carloads; California was second in quantity with 328 carloads, composed of fifteen items, of which 126 cars were oranges; Minnesota ranked third with 245 carloads composed of three different kinds of produce. The three states usually thought of as sources of citrus fruits and fresh vegetables during the winter months—namely, California, Texas, and Florida—furnished 463 carloads of produce to the Peoria market. This was equal to about 18 percent of the total carload receipts.

When distant producing regions in such large numbers find it possible to supply a market with fresh produce, the local producers are compelled to meet this competition or yield the market. The local producer may be able to compete owing to any one or a combination of the following reasons: (1) lower marketing and transportation costs, (2) quality comparable to or superior to that of other regions (local sweet corn is frequently of very high quality), or (3) production of a

TABLE 4.—ORIGIN OF CARLOADS OF FRESH FRUITS AND VEGETABLES UNLOADED AT PEORIA, 1935
(For potatoes, see Table 18, page 92)

Commodity and origin	Carloads
VEGETABLES	
Beans	
California	1
Florida	2
Louisiana	1
Total	4
Cabbage	
Iowa	1
Michigan	6
Minnesota	5
Mississippi	6
New York	4
Texas	4
Wisconsin	49
Unknown	1
Total	76
Carrots	
California	10
Texas	3
Total	13
Cantaloups	
Arizona	17
California	7
Colorado	2
Total	26
Cauliflower	
California	7
New York	1
Total	8
Celery	
California	6
Florida	10
Michigan	1
Pennsylvania	1
Total	18
Cucumbers	
Alabama	1
Illinois	1
Total	2
Lettuce	
Arizona	49
California	84
Colorado	1
Oregon	1
Texas	1
Washington	3
Total	139
Mixed cars[a]	
Arizona	1
California	20
Colorado	17
Illinois[b]	142
Florida	1
Indiana	1
Louisiana	2
Missouri[b]	17
Oregon	2
Texas	5
Total	208
Onions	
Arkansas	1
California	3
Colorado	1
Idaho	1
Indiana	4
Iowa	8
Louisiana	3
Maryland	1
Michigan	8
Minnesota	15
Texas	6
Utah	7
Washington	4
Wisconsin	5
Unknown	2
Total	69
Peas	
California	3
Colorado	1
Total	4
Radishes	
Oklahoma	1
Rutabagas	
Michigan	1
Spinach	
Maryland	1
Sweet potatoes	
Arkansas	2
Louisiana	3
Virginia	3
Total	8
Tomatoes	
Arkansas	3
Florida	8
Louisiana	3
Maryland	3
Mississippi	1
Tennessee	2
Texas	9
Total	29
Turnips	
Canada	1
Watermelons	
Alabama	11
Arkansas	1
Florida	11
Georgia	38
Mississippi	4
Missouri	2
Texas	4
Unknown	2
Total	73
FRUITS	
Apples	
Idaho	11
Illinois	48
Minnesota	1
Missouri	3
New York	1
Oregon	2
Washington	22
Total	88
Apples for cider	
Illinois	117
Iowa	4
Missouri	6
Total	127
Apples for storage	
Illinois	27
Bananas	
Foreign countries	352
Cranberries	
Massachusetts	4
Wisconsin	1
Total	5
Grapefruit	
Arizona	2
Florida	26
Texas	28
Total	56
Grapes	
California	18
Grapes, juice	
California	12
Lemons	
California	16
Mixed citrus	
California	3
Florida	3
Total	6
Oranges	
California	126
Florida	7
Texas	1
Total	134
Peaches	
Arkansas	9
Georgia	15
Illinois	4
Indiana	1
Total	29
Pears	
Washington	2
Pineapples	
Foreign	11
Plums and prunes[c]	
California	1
Idaho	1
Oregon	2
Washington	4
Total	8
Strawberries	
Florida	1
Louisiana	3
Mississippi	2
Tennessee	2
Total	8
Tangerines	
Florida	1

[a]Mixed cars of vegetables, fruits, or fruits and vegetables. [b]From other markets. [c]Fresh.

low-cost product which fills a place upon the market which cannot be filled by the other produce. In spite of the large volume of shipped-in produce, the local growers furnish a large proportion of the supply of the more common vegetables during that part of the year when local produce is in season.

RETAIL SALE OF FRESH FRUITS AND VEGETABLES

The retail store is by far the largest source of fresh fruits and vegetables in Peoria for the consuming public. The open-air markets are relatively unimportant in marketing fresh fruits and vegetables. The street peddler was less important in Peoria during the period of this study than previously, owing to a recently imposed city license fee of $25 on all door-to-door peddlers of fresh produce purchased for resale. The fee did not apply to growers peddling their own produce.

Retail Stores in Peoria

In 1935 there were 416 retail stores in Peoria carrying fresh produce. A few of this number dealt only in fresh fruits and vegetables; the majority were grocery stores with fresh produce as only one part of their business. The importance of the fresh-fruit and vegetable departments varied greatly among different grocery stores. In some stores fresh produce was limited to the less perishable items, and a stock of larger variety was carried only on special days or in seasons of low prices. In other stores the fresh produce was the most important phase of the business, and a large variety of high-grade fruits and vegetables was continually stocked.

It was only natural then to find great variation in the way fresh produce was arranged and cared for. It was sometimes difficult to realize that a given item being shown in two stores was obtained from the same source only a few hours before. Some storekeepers simply emptied the produce into a tray or window; others carefully removed the unsightly portions and neatly arranged their displays. Stores representing the extremes in methods of displaying produce were to be found in the same business area and each doing a thriving business.

Chain stores and some of the competing home-owned stores used mass displays of fruits and vegetables, as a rule, to attract customers. On the other hand, some of the credit stores, which had a large telephone-order business, filled such orders from stock not on display. This practice permitted them to give superior service to the "phone-order" business and to move the slightly inferior produce by direct sales at a slightly reduced price if necessary.

Five chain grocery-store companies with a total of 93 retail stores were represented in the city. Some of the chains had stores in all parts of the city, while others confined their stores to the business section and the higher-income wards. The remaining 323 stores were independent home-owned stores. Certain of these stores, however, had

banded together into organized groups for buying and advertising purposes. Thus, one saw "Blue Ribbon Stores," "City Service Stores," and "Super Service Stores." One of these organized groups of stores had direct affiliation with a Peoria wholesale establishment. The other two were free lances, buying from various sources at the best available price.

Retail Stores Cooperating in This Study.—A number of retail stores located in various parts of the city cooperated in this study of problems connected with the retail marketing of fresh fruits and vegetables. The purpose was to obtain information which would correlate more definitely the findings in the survey of consumer preferences with conditions in the wholesale markets. The cooperating retail stores represented chain stores, independent cash-and-carry stores, credit stores, and community stores.[1]

Some of the questions upon which definite information was sought were: (1) Is a uniform quality of produce commonly found in stores located in all parts of the city? (2) What items of produce are carried in stock by stores in different parts of town and over what periods of time? (3) What determines the variety of produce which a given store can profitably stock?

In order to secure the desired information, each store was visited once a week from May 25 to October 15, 1935, by representatives of the Experiment Station. Data were secured on the kinds and sources of fresh fruits and vegetables in stock, their quality, and the retail prices charged, the form shown in the Appendix, page 112, being used. Interviews with the proprietor and with customers were frequently the source of much valuable information in explaining the reasons for certain practices.

Quality of Fresh Produce Carried

The quality of produce stocked by retail stores did not vary greatly from one part of Peoria to another. This was more clearly illustrated in the chain stores, but it was true also for independent stores. The chain-store systems distributed a uniform quality of fresh produce to all their retail stores, regardless of the store's location. That is to say, the six-dozen size of head lettuce found in one store of a chain was of the same quality as that of another store in the chain. As a rule, the individual store managers in a chain system were permitted to purchase directly the local produce which they desired, and therefore such

[1]A community store is a store located in the residential area, usually small, but carrying a large variety of produce to meet the needs of the community. As a rule the community store gives credit but maintains no delivery service.

produce might vary some from store to store, depending upon the manager's needs or purchasing ability.

Variety of Fresh Produce Carried

There was a wide range, however, in the variety of fresh produce stocked by individual stores in Peoria. In general, only stores located in the business district or in the high-income districts carried a complete line of fresh produce at all times, while stores located in the lower-income districts carried a limited line, except during the period of low prices, which was usually restricted to the season of local produce.

This variation in produce carried was clearly evident from observations made of the retail stores of a chain located in all parts of town. One store of the chain carried a complete line of available fresh produce at all times, while another had a very limited line of fresh produce, so long as it was an expensive source of food. Some stores could not profitably stock strawberries until the retail price was 15 cents or less a quart, and seldom, if ever, did they stock fresh California plums and apricots or western pears. When a store's patrons were largely laborers receiving an average wage of 20 dollars or less a week, the fresh produce stocked, when local produce was not available, was limited to the cheaper items such as bunch carrots, cabbage, bananas, and oranges, except for week ends, when head lettuce, celery, and other items fairly low in price were stocked. On the other hand, stores having patrons with incomes sufficiently high to enable the store to use mushrooms as a leader carried a wide variety of fresh produce at all times.

The season over which a given store stocked an item of produce was, therefore, largely dependent upon the incomes of its patrons. The inability of patrons to purchase some of the higher-priced items caused a large number of stores to carry such fruits and vegetables as berries, peas, and sweet corn only when local produce was plentiful. On the other hand, there were a comparatively few stores that stocked expensive items at all times when they were available.

Retail Prices

The retail prices of fruits and vegetables of a given quality varied greatly from store to store within the city (Figs. 3 and 4). The standard of quality used in these studies was the graded or standardized pack sold by wholesale dealers. The improved appearance which a retail storekeeper might have given this produce by neatly trimming the lettuce and cabbage, or by carefully arranging the displays, was disregarded. The standard used did, however, distinguish between fresh produce and that which was old, wilted, or decaying.

With 100 used to represent the average weekly price for the entire period of this study, of all the vegetables commonly found in the retail stores of Peoria, the average weekly price in the highest-price stores ranged, during the different weeks of the study, from 114 percent to 144 percent, and in the lowest-price stores it ranged from 68 percent to 87 percent. Thus if a shopper were to have purchased, during the

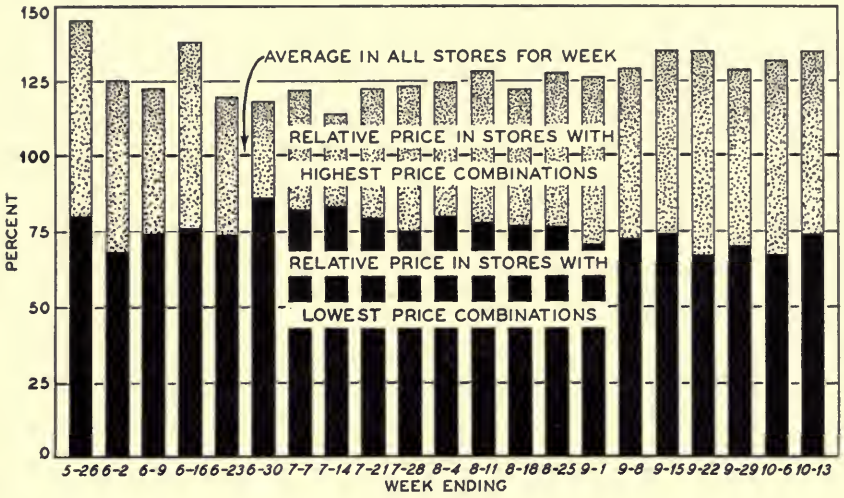

FIG. 3.—VARIATION IN WEEKLY AVERAGE RETAIL PRICES OF VEGETABLES IN THIRTY PEORIA RETAIL STORES, FOR DESIGNATED WEEKS, 1935

A great deal of variation occurred in the prices of vegetables in different stores. For the three-week period from June 24 to July 14, the weekly range narrowed, reflecting the influence of local produce.

different weeks of the study, the quantity of produce which at the average price of all the retail stores for the entire period would have cost her a dollar, she would have paid for it at the stores with the highest combination of prices, amounts ranging from $1.14 to $1.44, or at the stores with the lowest prices as little as 68 cents to 87 cents. The fruit prices did not vary so widely, and the high and low prices did not fluctuate so violently from week to week. The range in price between the high and low stores, however, was considerable. For a quantity of fruit costing a dollar at the average price of all stores for the entire period, a shopper would have paid in the different weeks of the study from $1.13 to $1.26 at the stores with the highest price combinations, whereas she would have paid only 75 cents to 89 cents at the stores with the lowest price combinations.

The range in price, along with the average price for each vegetable and fruit for the period over which it was found upon the retail market in sufficient quantity to permit analysis, is shown in Table 19, Appendix. The vegetables which were seasonal in nature or were produced in quantity locally, dropped rapidly in price as the season progressed. Tomatoes and sweet corn were typical examples. For some other

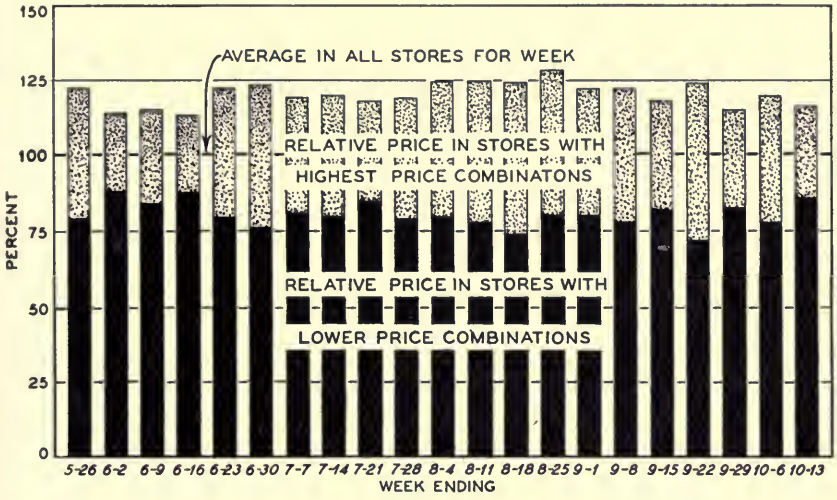
150
125
100
75
50
25
0
PERCENT
AVERAGE IN ALL STORES FOR WEEK
RELATIVE PRICE IN STORES WITH HIGHEST PRICE COMBINATONS
RELATIVE PRICE IN STORES WITH LOWER PRICE COMBINATIONS
5-26 6-2 6-9 6-16 6-23 6-30 7-7 7-14 7-21 7-28 8-4 8-11 8-18 8-25 9-1 9-8 9-15 9-22 9-29 10-6 10-13
WEEK ENDING

FIG. 4.—VARIATION IN WEEKLY AVERAGE RETAIL PRICES OF FRESH FRUITS IN THIRTY PEORIA RETAIL STORES, FOR DESIGNATED WEEKS, 1935

The variation in fruit prices was much less than in vegetable prices. Apparently margins for fruits were more standardized. There was a range of nearly 50 percent, however, between the composite low price and the composite high price of fruits in particular weeks.

crops which were found upon the market over a long period and were supplied largely by distant producing areas, prices fluctuated much less. Examples were bunched carrots and head lettuce.

The range in price was not determined entirely by store type or location, that is, whether it was a chain, credit, or community store. The high prices charged for a given item may have been justified by the storekeeper by one of a number of circumstances: (1) The item was what he termed a service item; the amount sold was small, but was in demand by a few of his patrons, who were willing to pay a good price. The shrinkage was great and even at the price charged the store might have lost money. (2) It was necessary to raise the price on other commodities to help pay the way of the leaders. (3) The rate of turnover was slow and the item was difficult to handle.

The low price on a given item was frequently due to the use of that commodity as a store leader. In these cases the price might have been such that the item paid the wholesale cost but left no margin of profit, or it might have been too low to cover the cost. In the latter case the item became a "loss leader." It was not uncommon to find a retail price equal to or below the local wholesale price.

The object of using leaders is to increase the volume of sales of the profit-making items of the business. The use of leaders may pay very well until the store's competitors start doing the same thing, or until the formerly regular customers begin to shop around. The retailers' practice of using leaders has induced many people to do this. They read the advertisements, and market accordingly, or they go to a section where two or more stores are in close proximity and proceed to compare prices. Such buyers defeat the purpose of the leader method, and as soon as a sufficient number of buyers become shoppers, the use of leaders is likely to be abandoned.

Retail Margins

At the time of this survey no formula was in common use among retail storemen to determine the retail sales price of fresh produce. Even in the same store the markup on one item might be much greater than on another, depending upon the rapidity with which the items moved and upon the shrinkage or losses likely to occur. The system of retail prices for perishable produce had been greatly complicated by the use of leaders, service items,[1] and other practices that had become well established.

Most retail stores handled well-graded and standardized produce in volume from distant regions at a lower markup than local produce. It was common for the retail store to double the purchase price in determining the retail price to be charged for local produce such as carrots, green onions, radishes, and rhubarb. A similar increase was frequently found in the case of green beans, peas, and spinach. The markup on tomatoes and cabbage varied considerably; for some items of local produce it ranged from 25 to 300 percent. The lowest markup was on produce used as a leader, while the highest markup was made on produce used as a service item, the amount sold being small in relation to the wholesale unit and requested by only a few patrons.

A few items of local produce were stocked in season by nearly all

[1]Items carried for the convenience of the patrons with an intent of making a profit on other items, the purpose being to keep the patrons from going elsewhere for their supplies.

retail stores without any expectation of making a profit from them. Sweet corn, strawberries, blackberries, and raspberries were items of this type. The retail storemen could give no reason for this situation. It did not appear to be within their power to correct the condition; therefore they were satisfied to accept it and say that custom had made it necessary to carry these products as service items. When strawberries were selling at wholesale from $2.40 to $2.75 a crate, the usual retail margin was 40 to 75 cents a crate, provided the berries were sold as received and the entire contents of the crate were sold. Frequently the losses due to shortage or shrinkage were such as to leave little or no profit. Of a large number of retail store proprietors interviewed only one claimed to have made a profit on berries during the season; this man had made a rather favorable purchase contract which enabled him to secure a larger retail margin than that of his competitors. Sweet corn was a similar item; the shrinkage was very large and the common markup of 25 to 50 percent was seldom sufficient to net a profit.

Competition Among Retail Stores

Between 1929 and 1933 the relative importance of chain stores in food distribution increased rapidly. The proportion of total sales in Illinois by chain stores handling both groceries and meats, the more important class of food stores, increased from 15 percent of the total in 1929 to 48 percent in 1933 (Table 5). Chain grocery stores not selling meat handled more than 60 percent of the total sales in both 1929 and 1933. This period (1929 to 1933) was marked by rapidly declining incomes, and consumers were forced to practice economy in buying food. The large-scale buying of chain stores enabled them to make prices which were attractive to financially depressed persons and, along

TABLE 5.—VOLUME OF BUSINESS DONE BY CHAIN AND INDEPENDENT RETAIL GROCERY STORES IN ILLINOIS, 1933[a]

Kind of store	Number of stores	Net sales	Percentage of total sales	
			1933	1929
Grocery stores without meats	8 650	$113 828 000	....	....
Independent	7 053	44 355 000	39.0	33.7
Chain	1 561	68 696 000	60.4	62.4
All other types	36	777 000	.6	3.9
Combination stores (groceries and meats)	9 755	205 126 000	....	....
Independent	7 937	106 981 000	52.1	80.6
Chain	1 803	97 718 000	47.7	15.0
All other types	15	427 000	.2	4.4

[a]U. S. Census Bureau, Census of American Business, 1933, Vol. 6, page 27.

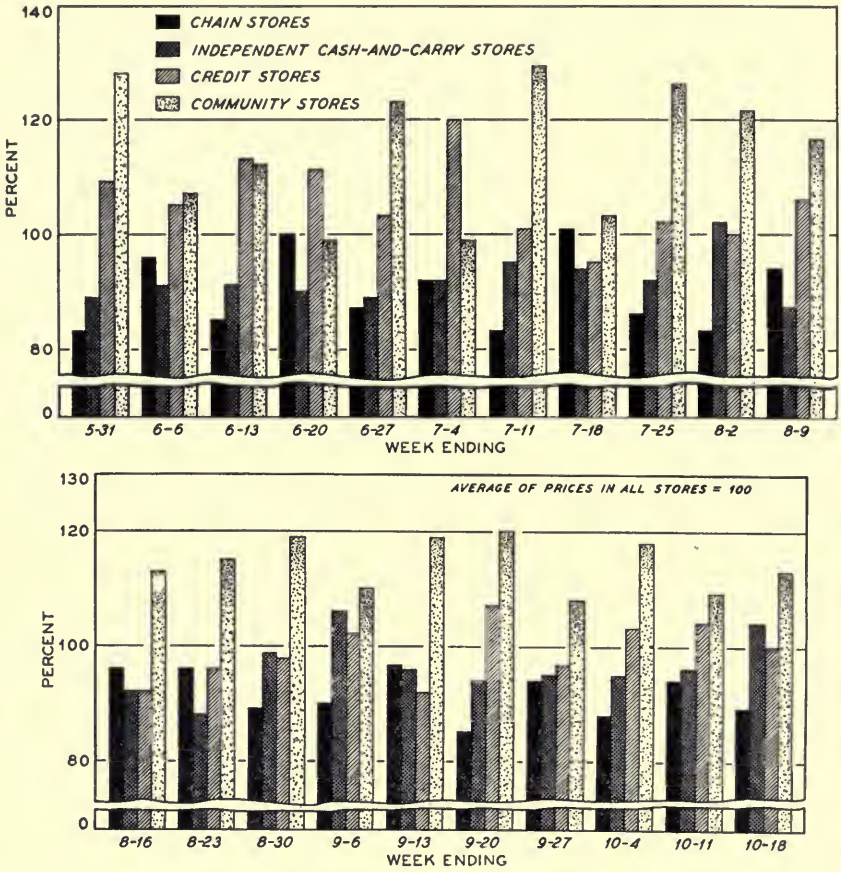

FIG. 5.—COMPARATIVE RETAIL STORE PRICES FOR FRESH PRODUCE, FOR DESIGNATED WEEKS, IN DIFFERENT TYPES OF RETAIL STORES

Prices in chain stores were rather consistently lowest. Next came prices in independent cash-and-carry stores, then those in stores which gave credit, and highest of all were the local community stores. Community stores have a comparatively small volume of business. Credit stores included were located outside the main business district.

with advertising methods, these prices were largely responsible for the rapid increase in the amount of business done by such stores.

The comparative prices of fresh produce of comparable qualities in various retail stores are shown in Fig. 5. Chain stores were the cheapest places to purchase produce for the period as a whole, if price alone is considered. At chain stores prices varied from week to week, so that frequently the independent cash-and-carry stores or credit stores

had the lower prices. The community stores were the only group that had consistently higher prices than the chain stores. Local convenience to consumers keeps them in operation.

Retailers' Sources of Fresh Produce

The retail stores in Peoria secured their fresh produce (1) from wholesale dealers, who handled almost entirely produce from distant regions; (2) from local producers at the Peoria Central Market, a local growers' market, or (3) directly from the local growers.

The wholesale dealers attempted to keep on hand a large variety of fresh fruits and vegetables the year round, while local produce was available only during the spring, summer, and fall months, except for a very small amount of greenhouse-grown produce and for those crops which can be stored to advantage.

The importance of the wholesale dealers as a source of the retail storemen's supply is evident when it is realized that an equivalent of 2,925 out of a total of 3,201 carloads of fresh produce used in the Peoria market came from distant regions. Of the total, over 90 percent passed thru the hands of the established wholesale dealers and chain-store warehouses.

The Peoria Central Market is maintained by the city as a meeting place for sellers and buyers of fresh produce. Altho originally only a retail market for local produce, as market conditions changed the market developed into a wholesale market, and with the increased movement of fresh produce by truck it has taken on some of the characteristics of a regional market. Many of the local retail storemen use the market as a place to secure their supplies of locally grown produce. Also a limited number of buyers from neighboring towns buy there.

A number of retail stores are served by local growers who peddle their produce from store to store. Also, a number of the stores regularly place orders with local growers who deliver the produce to the store.

SURVEY OF PRIVATE FAMILIES

In the final analysis the consumer is the party that the grower of fresh fruits and vegetables, the wholesale dealer, and the retail dealer is attempting to serve. Therefore it is to the interest of individual producers, wholesalers, retailers, and the industry as a whole to see that consumers' desires are satisfied. A study of consumers' habits and preferences for fresh fruits and vegetables was undertaken because of the light it might throw upon the marketing problems.

Peoria is divided into ten districts or wards. Computed from rentals paid, the average estimated family income for the different wards ranged from $1,300 to $3,000 a year (Fig. 6). About 4 percent of the families, selected at random from all precincts in a ward, were interviewed by three representatives of the Agricultural Experiment

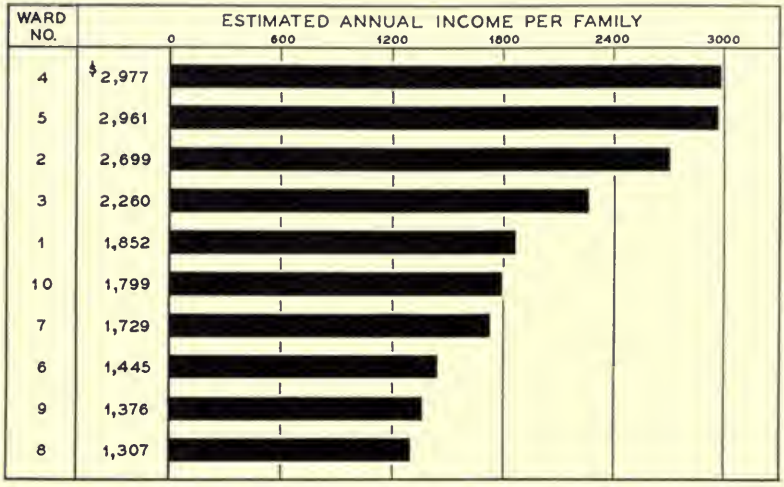

FIG. 6.—ESTIMATED ANNUAL INCOME PER FAMILY BY WARDS IN PEORIA

Average incomes were estimated to be four times the rentals paid, as determined from the 1930 U. S. Census. Data analyzed according to the average income level of the wards showed no correlation between the average income per family and the percentage of fresh fruits and vegetables purchased.

TABLE 6.—NUMBER AND AVERAGE SIZE OF FAMILIES INTERVIEWED IN CONSUMER SURVEY IN PEORIA, 1935

Ward No.	Total number of families	Number of families interviewed	Percentage families interviewed were of total families	Average size of families interviewed	Total population of ward[a]
1	2 211	84	3.8	3.4	8 342
2	2 817	133	4.7	3.5	10 325
3	3 004	102	3.4	3.3	13 881
4	3 042	120	3.9	3.8	12 193
5	3 897	171	4.4	3.3	15 144
6	2 675	113	4.2	3.9	10 741
7	1 973	77	3.9	3.3	8 711
8	2 247	87	3.9	4.1	9 790
9	2 303	91	4.0	4.0	9 199
10	1 734	104	6.0	3.8	6 643
Total	25 903	1 082	...	...	104 969
Average	.....	...	4.2	3.6	

[a]1930 U. S. Census, vol. 6, page 390.

Station during June and July, 1935, using the first questionnaire shown in the Appendix on pages 111-112 (Table 6 and Fig. 7).

It was recognized that the survey would probably not yield accurate quantitative data on the questions asked, but it is believed that the assembled data from the 1,082 families interviewed are a good guide to certain practices that prevail in the buying and use of vegetables in Peoria.

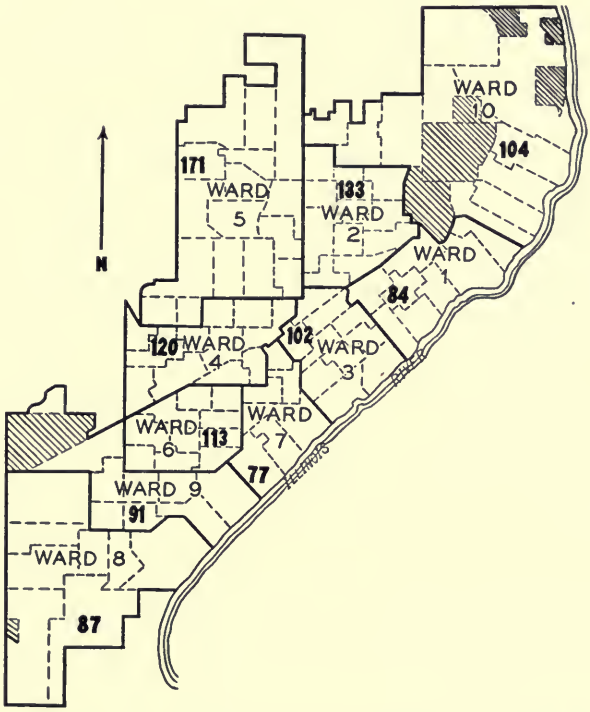

FIG. 7.—NUMBER OF PEORIA WARDS AND NUMBER OF CONSUMERS INTERVIEWED IN EACH WARD

In the ten Peoria wards a total of 1,082 families were interviewed during June and July, 1935. These interviews were well distributed over the city, as shown by the figures in each ward of the total number of families interviewed in that ward.

Use of Fresh Vegetables

The families in the different wards purchased an average of 63 to 70 percent of their total vegetable supply as fresh vegetables or raised and consumed them without canning. Of the total vegetable supply for all the families interviewed, 68 percent was used as fresh vegetables,

6 percent was home-canned, and 25 percent was purchased canned (Table 7).

The consumption of fresh vegetables was not directly correlated with the average family income. Altho fresh vegetables are not a cheap source of food, the families of the comparatively low-income wards used nearly as large a percentage of fresh vegetables as did the families of the higher-income wards. There are four possible explanations for this: (1) cheaper kinds of fresh vegetables were used; (2) a lower quality of vegetable was used; (3) a given vegetable was used at the season when it was low in price; (4) more of the vegetable supply was

TABLE 7.—CONSUMPTION OF FRESH, HOME-CANNED, AND COMMERCIALLY CANNED VEGETABLES AND SOURCES OF FRESH VEGETABLE SUPPLY OF FAMILIES INTERVIEWED IN PEORIA, 1934-35

Ward No.	Percentage of total supply—			Percentage of fresh supply—	
	Used fresh	Home-canned	Purchased canned	Purchased	Grown in home garden
1	70.0	6.7	23.3	94.3	5.7
2	70.5	3.8	25.7	97.3	2.7
3	67.3	3.1	29.6	97.8	2.2
4	66.5	7.1	26.4	96.3	3.7
5	75.6	5.4	19.0	92.1	7.9
6	63.2	9.2	27.6	95.4	4.6
7	68.0	5.5	26.5	97.2	2.8
8	63.0	7.4	29.6	90.5	9.5
9	65.1	6.2	28.7	96.3	3.7
10	69.6	8.4	22.0	90.0	10.0
Average	68.4	6.2	25.4	94.7	5.3

grown by the consumer. While few actual data were available on the season of the year a given vegetable was used by families with different incomes, information obtained from store managers indicated that the season over which a given item of produce was stocked depended on the incomes of their patrons.

The more bulky vegetables, such as cabbage and snap beans, were consumed freely by families of low incomes, and were therefore stocked by all stores so long as prices were reasonable. On the other hand, such crops as peas, which are usually expensive when bulk and food values are considered, were stocked only when prices were very low, by those stores with patrons having low incomes.

A very similar relation was found for fruits that are seasonal in nature. The stores serving patrons of the high-income groups stocked strawberries, for example, regardless of price, while stores serving patrons of the low-income groups waited until the retail price was 15 cents a quart or two quarts for 25 cents before they stocked them.

Amount of Vegetables From Home Gardens

An average of 5 percent of the fresh-vegetable supply of the families interviewed was grown by the family and the balance, or 95 percent, purchased (Table 7). The amount of vegetables from home gardens varied considerably between wards, ranging from about 2 to 10 percent of the fresh supply. This relatively small amount of home-grown produce is more important to the local commercial producers than the percentage indicates because it is consumed when local produce of the same kind is on the market. While the local produce was on the market, the city families were producing upward of 10 percent of their fresh-vegetable supply.

Home Canning of Vegetables

The amount of canning of vegetables done by the families interviewed was of little consequence in relation to the total volume of vegetables used by these families, the amount of vegetables canned at home ranging in the various wards from 3 to 9 percent of the total vegetable supply of these families. However, even this amount of home canning is of importance to the local vegetable growers since they were

TABLE 8.—HOME CANNING OF VEGETABLES BY FAMILIES INTERVIEWED IN PEORIA, 1934-35

Ward No.	Number canning	Percentage who did canning	Percentage of supply which was home-canned[a]
1	34	40.5	16.5
2	51	38.3	10.0
3	22	21.6	14.5
4	55	45.8	15.5
5	69	40.4	13.4
6	67	59.3	15.4
7	26	33.8	16.3
8	50	57.5	12.8
9	57	63.3	9.9
10	67	64.4	12.8
Total	498	....	....
Average	...	46.0	13.4

[a]In families that canned vegetables.

the principal source of the produce used for canning. Only 46 percent of the families interviewed canned vegetables at all (Table 8). This group canned an average of 13 percent of their supply, the percentage ranging in the different wards from 10 to 16.

Home canning seems to be more closely related to the housewife's personal habits, or to the desire of the family for the flavor of home-canned goods, than to the family income. The interviewers found that the housewives who did canning took personal pride in it

and had definite ideas as to the amounts they had canned. However, when asked why they did canning, the most common reply was that the family liked the flavor of home-canned goods better than that of purchased canned goods, thereby stressing quality rather than economy. Frequently those interviewed stated that it was as cheap to purchase canned goods as to do home canning. The economy motive was more evident in the families that had a cherry tree, an apple tree, a strawberry patch, or the like, which supplied more produce than they could use in the fresh state, and so they canned as a means of saving it.

Sources of Fresh Vegetables Purchased

Nearly 95 percent of the total fresh-vegetable supply of the families interviewed was purchased (Table 7). It is of interest to know the sources of the family purchases, as this indicates the importance of the various channels thru which fresh vegetables are marketed. The

TABLE 9.—SOURCES OF FRESH VEGETABLES PURCHASED BY FAMILIES INTERVIEWED IN PEORIA, 1934-35

Ward No.	Percentage purchased from—			
	Retail store	Street peddler	Roadside market	Farmer
1	82.8	7.3	1.7	8.2
2	90.8	5.2	1.2	2.8
3	85.6	7.1	2.3	5.0
4	85.0	6.4	2.8	5.8
5	89.0	6.0	.6	4.4
6	82.7	13.1	.6	3.6
7	86.9	9.7	.4	3.0
8	89.3	6.7	.7	3.3
9	90.8	7.2	2.0	0
10	85.2	6.6	.9	7.3
Average	86.8	7.5	1.4	4.3

retail store was found to be by far the most important source of supply, accounting for 83 to 91 percent of the total purchases in the different wards, and averaging 87 percent in all wards (Table 9). The remaining 13 percent was purchased from three sources: 8 percent from the street peddler; 4 percent direct from the farmer; and 1 percent from open markets.[1]

During the season of 1935 the city imposed a peddler's tax upon individuals desiring to sell purchased produce to consumers by the

[1]The term "open markets" refers to open street markets, some of which can be enclosed and operated thruout the year, and to roadside or farmers' markets.

house-to-house method. This tax did not apply to growers wishing to peddle their own produce. The tax greatly curtailed the activity of the former class of peddlers, and it is therefore questionable if as large a percentage of the consumers' supply as indicated above for the 1934 season was purchased from the street peddler during the 1935 season.

Potato Consumption

The average estimated consumption of potatoes per person in Peoria during the year 1934-35 was 10 pecks (Table 10). The estimated potato consumption of the city was equal to 270,000 bushels, or an equivalent of 450 carloads. The Peoria district is a potato-deficient area, and therefore is a good market for potatoes from outside producing regions.

There was a tendency for people living in the lower-income wards to use more potatoes than those living in the higher-income wards.

TABLE 10.—ESTIMATED POTATO CONSUMPTION IN PEORIA AND VARIETY PREFERENCE OF FAMILIES INTERVIEWED, 1934-35

Ward No.	Average size of families interviewed	Pecks consumed per individual	Estimated total consumption in bushels	Percentage who preferred—			Percentage having no choice
				Red	White	Idaho	
1	3.4	10.7	22 315	29.8	11.9	23.8	34.5
2	3.5	9.2	23 748	14.2	9.8	28.6	47.4
3	3.3	10.2	35 397	15.6	12.7	11.8	59.9
4	3.8	9.2	28 044	10.9	5.9	37.0	46.2
5	3.3	9.7	36 724	14.0	5.3	47.4	33.3
6	3.9	9.7	26 047	51.3	8.8	1.8	38.1
7	3.3	13.2	28 746	23.4	14.3	18.2	44.1
8	4.1	11.0	26 922	35.7	3.4	4.6	56.3
9	4.0	10.3	23 687	29.7	7.7	1.1	61.5
10	3.8	11.2	18 600	33.7	13.5	11.5	41.3
Total	...	....	270 230	....	....	....	....
Average	3.6	10.4	.....	25.8	9.3	18.6	46.3

The average consumption per person in the five wards with highest incomes was 9.9 pecks for the year compared with 11.1 pecks in the five wards with lowest incomes. The most common explanation for the larger potato consumption of low-income families, as given by store managers, was that potatoes are a cheap source of food. A second reason commonly given was that, as a rule, the low-income groups are laborers and therefore naturally eat heavier food than do clerks, office employees, and those in similar occupations.

Variety Preferences.—The importance of potatoes in the family diet would cause one to expect consumers to have decided variety

preferences. However, the results of a survey show that the majority of the consumers know potatoes only as "red," "white," and "Idaho," or perhaps all red varieties as Red River Ohios and all white varieties as Cobblers.

Forty-six percent of the people interviewed had no variety preferences (Table 10). They were willing to purchase whatever kind of potatoes was available at the time: potatoes were just potatoes. Twenty-six percent preferred red potatoes, 9 percent preferred white potatoes, and 19 percent preferred Idaho baking potatoes. Only those who preferred Idaho baking potatoes had definite reasons for their preference. Some families gave as the reason that they were fond of baked potatoes; others claimed that the Idaho potatoes were more economical even tho the first cost was considerably more. A representative reply was, "If you had to peel the others and cut out the eyes, you would know why I prefer the Idaho potatoes."

While the above information may be of no immediate value for the solution of marketing problems, it points clearly to problems facing the potato producers and breeders. Marketing agencies will continue their search for a good smooth potato of high quality that can be placed upon the market at a reasonably low price.

Unit of Purchase.—Less than 3 percent of the Peoria families interviewed laid in a winter's supply of potatoes; 9 percent purchased by

TABLE 11.—UNITS IN WHICH POTATOES WERE PURCHASED, AND LOCAL SOURCES OF POTATOES PURCHASED BY CONSUMERS INTERVIEWED, PEORIA, 1934-35

Ward No.	Percentage who purchased—					Percentage purchased from—			
	Year's supply	100-pound bag	Bushel	Peck	Smaller amount	Retail store	Street peddler	Roadside market	Farmer
1.....	2.4	10.8	2.4	83.2	1.2	95.3	0	1.1	3.6
2.....	2.3	5.3	3.0	85.7	3.7	91.2	.8	0	8.0
3.....	.9	5.8	3.9	83.6	5.8	94.8	1.0	1.0	3.2
4.....	1.7	2.5	3.3	82.4	10.1	97.3	.9	0	1.8
5.....	2.3	8.2	2.3	81.9	5.3	96.4	1.2	1.2	1.2
6.....	6.2	12.4	5.3	76.1	0	87.6	.9	0	11.5
7.....	1.3	16.8	1.3	71.5	9.1	98.6	0	0	1.4
8.....	1.1	6.9	4.6	87.4	0	93.6	0	0	6.4
9.....	3.3	12.1	5.5	79.1	0	93.2	0	0	6.8
10.....	6.7	12.5	6.7	74.1	0	86.9	0	0	13.1
Average..	2.8	9.4	3.8	80.5	3.5	93.5	.5	.3	5.7

the 100-pound bag; about 4 percent purchased by the bushel; more than 80 percent purchased by the peck; and more than 3 percent purchased in quantities smaller than a peck (Table 11). The small size of the common retail unit revealed by this analysis must be kept in mind

in studying marketing problems. "Poor home storage facilities" was the most important reason given for the small unit of purchase. Many retailers, in an effort to serve their customers, were selling potatoes in peck lots at a unit price which would return about the same total price as they would receive had they sold them by the bag. The statement was commonly made by consumers: "We purchase potatoes by the peck because it is economical." Many families spoke of the peck as a convenient unit in that it lasted their family a week, or that it worked well into their method of purchasing, or that it was an easy quantity to handle.

Some of the wholesale marketing organizations recognize this desire of consumers for small units of purchase and are making the peck the original package rather than the usual 100-pound bag.

Method of Purchase.—More than 93 percent of the total amount of potatoes purchased by the consumers interviewed was purchased from retail stores, about 6 percent directly from local farmers, and less than 1 percent from street peddlers and open markets (Table 11). The percentage supplied by local farmers will vary greatly from season to season. Potatoes are not grown in the vicinity of Peoria as a commercial crop; therefore only the small surpluses of individual farmers come onto the market. As a rule, these surpluses are sold as field run and do not command high prices.

Fresh-Fruit Consumption

The average amount of fresh fruit consumed per family did not vary greatly among the different wards of the city (Table 12), and in most of the families fresh-fruit consumption was apparently not associated with family income. The lowest apple consumption was found in wards which ranked fourth and seventh in average family income, and the highest consumption in wards ranking third and eighth in average family income. Similar relationships were found to exist for peaches, cherries, strawberries, and raspberries. The consumption of grapefruit more closely paralleled average family income.

The average fruit consumption per family per year was 3 bushels of apples, 2 bushels of peaches, 22 quarts of cherries, slightly over 1 bushel of pears, 17 quarts of raspberries, 48 quarts of strawberries, 10 quarts of blackberries, 116 pounds of bananas, 56 dozen oranges, and 122 grapefruit.

Very wide differences in the consumption of a given fruit were found between families. These differences were due primarily to availability of supply, preferences of individuals, and the purchasing power

of the family. Especially large differences were found in the use of local fruits, as frequently the family had free access to a source of production. Some families had trees of their own, or relatives on a farm supplied them with fruit. In other cases members of the family harvested fruit on a share basis, so that the fruit was obtained without a cash outlay. The heavy consumption of cherries is often explained by the opportunity to obtain them from one of these sources.

The relatively high consumption of pears by families of some of the low-income wards may be due directly to the low price of the

TABLE 12.—AVERAGE ANNUAL CONSUMPTION OF FRESH FRUIT PER FAMILY INTERVIEWED, PEORIA, 1934-35

Ward No.	Apples	Peaches	Cherries	Pears	Raspberries	Strawberries	Blackberries	Bananas	Oranges	Grapefruit	Rank of ward in income
	bu.	*bu.*	*gals.*	*bu.*	*qts.*	*qts.*	*qts.*	*lbs.*	*doz.*	*no.*	
1.....	3.4	1.9	3.4	.8	9.8	45.6	5.0	107	46	100	5
2.....	3.9	2.0	6.5	1.2	19.2	64.8	9.8	115	71	152	3
3.....	2.6	1.5	3.6	.8	8.4	33.6	5.3	77	45	100	4
4.....	3.6	1.9	3.6	.9	16.8	48.0	5.8	106	66	171	1
5.....	3.2	1.7	3.0	.7	21.6	45.6	18.7	124	69	185	2
6.....	3.8	1.8	7.6	1.2	26.4	50.4	11.0	102	54	85	8
7.....	2.9	1.4	2.9	1.1	12.0	43.2	7.7	123	50	139	7
8.....	3.6	1.5	10.3	2.9	10.3	40.8	10.0	144	46	84	10
9.....	3.6	1.7	7.1	1.2	19.8	50.4	13.9	163	55	92	9
10.....	3.7	2.2	7.1	2.7	21.6	55.2	13.2	103	55	111	6
Average	3.4	1.8	5.5	1.4	16.6	47.8	10.0	116	56	122	..

Kieffer pear, which is a common local variety. While Kieffer pears are considered by many people an inferior fruit, the people of these groups seem to have cultivated a taste for them, and consume considerable quantities of canned as well as fresh Kieffer pears.

Oranges were generally looked upon by consumers as a very desirable fruit for children. Frequently oranges had as definite a place in the family diet as potatoes or meat, in that they were used in a definite quantity for a given meal, usually breakfast. Bananas were looked upon by the laboring class as a very desirable lunch fruit.

Canning of Fruit

The average amount of fruit canning done by the families in the various wards who canned fruit varied from 51 to 87 quarts in 1934 (Table 13). This amount may vary considerably from year to year, depending on the local supply of such fruits as apples, cherries, strawberries, and raspberries, and on the retail prices of those fruits which must be obtained from distant regions.

The average amount canned per family was 60 quarts of fruit, of

TABLE 13.—AVERAGE QUANTITY OF FRUIT CANNED BY FAMILIES INTERVIEWED THAT CANNED ANY FRUIT, PEORIA, 1934-35

Ward No.	Percent families canning	Apples	Peaches	Cherries	Pears	Straw-berries	Rasp-berries	Black-berries	Un-specified fruit[a]	Total canned
		qts.	qts.	qts.	qts.	qts.	qts.	qts.	qts.	qts.
1	55.6	4.6	14.2	4.7	7.6	6.8	1.6	.2	13.2	52.9
2	54.9	5.1	6.4	7.8	9.9	6.0	3.4	1.6	13.8	54.0
3	34.0	5.3	18.8	9.2	9.9	3.6	2.0	.3	2.1	51.2
4	60.0	6.2	21.4	8.9	11.9	5.2	5.3	2.4	16.2	77.5
5	50.9	4.0	19.3	8.1	7.3	5.3	4.3	1.4	5.7	51.4
6	52.2	4.8	17.4	9.8	8.9	5.8	3.0	3.2	2.8	55.7
7	37.6	7.8	18.3	7.2	14.3	7.0	5.5	9.0	17.8	86.9
8	63.2	4.5	16.7	7.4	17.5	2.9	1.8	2.6	8.1	61.5
9	46.2	1.7	20.8	7.2	13.2	6.2	2.5	3.5	7.4	62.5
10	72.1	6.0	13.8	7.2	8.6	5.1	2.6	2.7	10.7	56.7
Average	53.2	5.0	16.7	7.8	10.9	5.4	3.2	2.7	8.2	59.9

[a]Includes fruit of those who canned but did not specify quantity of each fruit canned.

which 5 were apples; 17, peaches; 8, cherries; 11, pears; 5, strawberries; 3, raspberries; 3, blackberries; and 8, unspecified fruits.

Fifty-three percent of the families interviewed canned some fruit (Table 13). Considering the wards separately, the percentage of families doing canning ranged from a low of 34 percent in the ward ranking fourth in average family income to a high of 72 percent in the ward ranking sixth in average family income. Sixty percent of the families in the ward ranking highest in average family income canned fruit, while 63 percent of the people in the ward ranking lowest in average family income canned some fruit.

Sources of Fresh Fruits Purchased

Ninety-one percent of the total amount of fresh fruit purchased by the consumers interviewed was purchased thru retail stores, 4 percent

TABLE 14.—SOURCES OF FRUIT PURCHASED BY CONSUMERS INTERVIEWED IN PEORIA, 1934-35

Ward No.	Percentage purchased from—			
	Retail store	Peddler	Roadside market	Farmer
1	84.9	3.8	1.7	9.6
2	90.7	5.7	.3	3.3
3	93.1	2.4	.6	3.9
4	91.1	1.1	3.9	3.9
5	94.4	2.6	2.5	.5
6	88.8	5.8	.3	5.1
7	92.5	2.7	1.0	3.8
8	92.5	5.6	0	1.9
9	92.9	5.9	.2	1.0
10	88.9	4.7	.1	6.3
Average	91.0	4.0	1.1	3.9

from street peddlers, 4 percent directly from farmers, and a little over 1 percent from roadside markets (Table 14). The importance of locally grown fruit varied considerably in different parts of town. By wards, purchases from farmers ranged from 1 to more than 9 percent and from retail stores from 85 to 94 percent. Again the retail stores were of prime importance.

SURVEY OF EATING ESTABLISHMENTS

There were 238 eating establishments in business in Peoria in 1933.[1] Some served complete meals; others were lunch counters serving mainly sandwiches. The revenue of these establishments amounted to $1,938,000 in 1933. It is therefore important from the marketing point of view to know the kinds and amounts of fruits and vegetables used by these eating places and the season over which they are used.

For the purposes of this survey, these eating houses were grouped into three classes. Class A included those restaurants and public dining rooms serving complete meals at moderately high prices. In these establishments preparation and service are more important than the original cost of the food. Economical buying, however, is not overlooked by this group as a means of reducing expenses. Class B establishments are those serving complete meals at moderate prices. In these places good food is more essential than style; therefore the cost of quality food is a major item of consideration. Class C establishments are those specializing in serving economy meals. Frequently their business is built on the sale of 15- and 25-cent plates. It is essential for these establishments to serve staple items of food which are low in price and easy to prepare.

Use of Fresh Fruits and Vegetables

The percentage of their vegetable supply purchased fresh by the five Class A establishments studied ranged from 30 percent to 70 percent. The range in the five Class C establishments was from 10 percent to 40 percent. From 84 to 90 percent of the fresh-vegetable supply of all fifteen places was purchased from Peoria wholesale houses (Table 15). Purchases of fresh fruit from wholesale dealers ranged from 79 to 92 percent for all fifteen establishments. Slightly more than 11 percent of the total fresh produce used was purchased from local growers, but about one-fourth of the establishments purchased 25 percent of their fresh fruit directly from growers.

[1]Census of American Business Retail Distribution, 1933, by Areas. pp. 33-44.

TABLE 15.—SOURCES OF FRUITS AND VEGETABLES PURCHASED BY FIFTEEN PEORIA EATING ESTABLISHMENTS, 1934-35, BY CLASS OF ESTABLISHMENT

	Class A	Class B	Class C	All
Number of establishments interviewed	5	5	5	15
Vegetables, proportion purchased fresh	*perct.*	*perct.*	*perct.*	*perct.*
Average	59	43	26	43
Range	30-70	15-60	10-40	10-70
Fresh vegetables, proportion purchased from—				
Wholesaler	90	84	84	86
Retail store	0	2	5	2
Grower	10	14	11	12
Fresh fruit, proportion purchased from—				
Wholesaler	92	89	79	87
Retail store	0	2	5	2
Grower	8	9	16	11

The average length of time during the year when these three groups of eating places served different items of produce varied widely (Table 16). Carrots, cabbage, celery, peppers, dry onions, head lettuce, and tomatoes were used over long periods by all of them. Class B establishments used no fresh peas or green onions; Class C establishments used no fresh lima beans or beets.

TABLE 16.—AVERAGE VOLUME AND PERIOD OVER WHICH VARIOUS KINDS OF FRESH PRODUCE WERE USED BY DIFFERENT CLASSES OF EATING ESTABLISHMENTS, PEORIA, 1934-35

Vegetable and unit	Class A		Class B		Class C	
	Amount used	Weeks used	Amount used	Weeks used	Amount used	Weeks used
Asparagus, *dozen bunches*	264	11	153	6	24	7
Beans, green, *hampers*	96	31	6	6	8	14
Beans, lima, *quarts*	220	4	20	1	0	0
Peas, *hampers*	6	4	0	0	4	2
Beets, *dozen bunches*	93	14	28	8	0	0
Beets, *bushels*	12	15	0	0	4	7
Carrots, *hundredweight*	83	52	21	29	15	52
Cabbage, *hundredweight*	248	52	49	52	24	52
Cauliflower, *crates*	99	34	16	16	34	16
Celery, *dozen bunches*	343	52	110	45	46	52
Cucumbers, *dozen*	88	42	31	15	1	2
Eggplant, *number*	127	6	16	3	2	1
Lettuce, leaf, *bushels*	72	13	4	2	8	5
Lettuce, head, *crates*	269	43	46	46	20	39
Parsnips, *bushels*	9	8	1	4	1	1
Peppers, *pounds*	35	52	44	39	121	40
Onions, green, *dozen bunches*	90	13	0	0	4	2
Onions (dry), white, *pounds*	2 080	21	260	10	104	10
Onions (dry), yellow, *pounds*	6 760	42	6 428	42	3 484	41
Radishes, *dozen bunches*	260	26	31	5	29	14
Rhubarb, *dozen bunches*	31	5	4	2	26	9
Spinach, *bushels*	142	47	82	34	16	8
Sweet corn, *dozen*	368	10	83	6	62	7
Sweet potatoes, *hampers*	103	44	39	27	21	24
Tomatoes, hothouse, *pounds*	1 328	20	687	14	138	11
Tomatoes, southern, *pounds*	1 818	18	444	19	440	14
Tomatoes, local, *pounds*	3 480	12	2 178	15	985	15

The Class C places served a smaller variety of vegetables and fruits over a shorter period than the Class A or B places. The prices of their meals made it necessary to use only the more staple foods which almost everybody likes, which are easy to prepare, and are low in price. These were frequently supplemented with local produce when in season and low in price. The Class B establishments varied greatly in regard to the vegetables which they served. Only a few kinds, such as cabbage, celery, head lettuce, peppers, dry onions, sweet corn, and tomatoes, were used by all of them. Class A restaurants served a wider variety of vegetables and served them over a longer period.

Potato Preferences and Methods of Serving

The variety preferences of the fifteen eating establishments surveyed and the methods they used in serving potatoes are shown in

TABLE 17.—VARIETY PREFERENCES AND METHODS OF SERVING POTATOES IN FIFTEEN PEORIA EATING ESTABLISHMENTS, 1934-35

	Class A	Class B	Class C	Total average
	Percentage of given type of potatoes used			
Variety				
Idaho	67.7	59.7	32.2	53.2
Red River Ohio	25.1	0	14.9	13.3
Michigan	2.6	37.3	17.4	19.1
Wisconsin	0	0	31.1	10.4
New	4.6	3.0	4.4	4.0
Total	100.0	100.0	100.0	100.0
	Percentage of potatoes served as indicated			
Method of serving				
American fried	11.1	39.0	33.1	27.7
Baked	11.3	7.7	4.8	7.9
Boiled	4.6	3.0	4.4	4.0
French fried	36.5	11.6	8.5	18.9
Mashed	36.5	38.7	49.2	41.5
Total	100.0	100.0	100.0	100.0

Table 17. Idaho potatoes ranked first in preference, making up over 53 percent of the total supply used. Some of the establishments used Idaho potatoes for all purposes except when new potatoes were desired; others used them only for baking. Red River Ohio potatoes ranked second in variety preference. Some preferred potatoes grown in a certain region, such as Michigan or Wisconsin, rather than a certain variety.

The proportions of the total potato supply served according to the different methods used were: mashed, over 41 percent; American fried, about 28 percent; French fried, 19 percent; baked, 8 percent;

and boiled, 4 percent. It is of interest to note that Idaho potatoes ranked first in preference even tho baked potatoes for which they are particularly adapted ranked fourth.

TRENDS IN METHOD OF PURCHASING

Smaller Retail Units and Stocks

In recent years there has been a radical change in methods of buying and selling fruits and vegetables. Perhaps no data available illustrate the change in the purchases more clearly than do those concerning potato purchases. It has been pointed out above that in 1934 more than

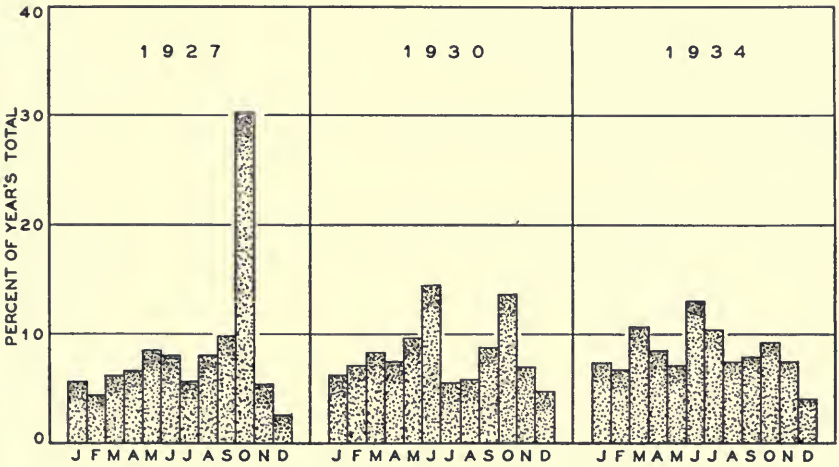

FIG. 8.—SEASONAL RECEIPTS OF CARLOADS OF POTATOES UNLOADED AT PEORIA IN 1927, 1930, 1934

In 1927 the largest receipts of potatoes were in October when late potatoes are harvested; in 1930 the distribution was more uniform; and in 1934 the October supply was equal only to that of an average month. There is now a tendency to hold potatoes in the producing areas and to ship them to consuming areas only as they are needed.

80 percent of the families in Peoria purchased potatoes by the peck and more than 3 percent purchased them in even smaller quantities (Table 11, page 84). Less than 10 percent purchased potatoes in 100-pound bag lots and less than 3 percent purchased their year's supply at one time, whereas a few years earlier these larger units of purchase were more common. The small unit is now the customary one used by consumers for purchasing all fresh fruits and vegetables.

Retail dealers are carrying smaller stocks since they can fill their requirements at any time. In the case of potatoes, sales are nearly uniform from week to week thruout the year.

More Uniform Seasonal Purchases

The present trend is toward more even seasonal purchases, with the storage function shifted back largely to producing regions.

The monthly carlot unloadings of potatoes in Peoria in 1927, 1930, and 1934 indicate a marked reduction in the quantities unloaded during October, when late potatoes are harvested. In 1927 there was a high peak in October; in 1930 the peak was lower; in 1934 the October supply was equal only to that of an average month (Fig. 8). The 1934 figures mean that no large quantities of potatoes were then being stored in Peoria during the fall, either by consumers, retailers, wholesalers, or by other dealers, as was formerly the custom. The reasons for this change appear to be: (1) that the wholesale distributor can buy produce at all times and get quick delivery, hence he prefers

TABLE 18.—CARS OF POTATOES UNLOADED AT PEORIA; STATE OF ORIGIN AND FREIGHT RATES FROM SHIPPING POINTS TO PEORIA, 1935

State	Freight rate	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
	cts. per 100 lbs.													
Alabama	55–57	..	..	..	..	23	8	1	1	..	..	1	..	34
Arkansas	54	..	..	..	..	..	2	..	..	..	..	..	..	2
California	96	..	..	..	..	..	2	9	..	..	..	..	..	11
Colorado	65	..	..	..	..	..	..	..	..	..	4	1	3	8
Idaho	64–81½	27	15	8	12	1	..	1	6	9	16	6	5	106
Illinois	.....	..	..	..	1	..	..	1	1	..	..	1	..	4
Iowa	31	..	..	..	..	..	..	..	..	10	1	..	..	11
Florida	86	..	..	1	..	..	..	..	..	..	..	..	..	1
Kansas	32	..	..	..	..	..	..	21	6	..	..	..	..	27
Kentucky	32	..	..	..	..	..	..	1	4	..	..	..	..	5
Louisiana	55–72	..	..	..	3	24	18	..	..	..	..	..	..	45
Maine	79–84	1	1	..	..	1	..	..	..	..	..	..	..	3
Maryland	58	..	..	..	..	1	..	..	..	..	..	..	..	1
Michigan	23–37	9	12	4	23	19	17	5	..	2	1	2	..	94
Minnesota	26–44½	1	8	15	9	4	..	..	55	46	46	28	13	225
Mississippi	56	..	..	..	..	..	3	..	..	..	..	..	..	3
Missouri	31	..	..	..	..	..	..	20	5	..	..	..	..	25
Nebraska	31	..	..	..	..	..	..	..	1	..	..	..	1	2
New Jersey	57	..	..	..	..	..	..	..	1	..	..	..	..	1
North Carolina	56–62	..	..	..	..	..	38	7	..	..	..	..	..	45
North Dakota	45	2	3	15	4	..	..	..	..	21	86	21	12	164
Ohio	.....	..	..	..	..	..	1	..	..	..	..	..	..	1
Oklahoma	48–58	..	..	..	..	..	2	5	..	..	..	..	..	7
Oregon	77–86½	..	..	..	..	..	..	..	2	..	..	..	..	2
Pennsylvania	.....	..	..	..	..	..	..	..	1	..	..	..	..	1
South Dakota	37	..	..	..	..	..	..	..	..	..	2	7	..	9
Tennessee	41	..	..	..	..	..	1	1	..	1	..	..	..	3
Texas	65–86½	..	..	..	1	..	2	1	..	..	..	..	..	4
Virginia	55–58	..	..	..	..	..	4	9	1	1	..	..	..	15
Washington	86	..	..	..	..	1	..	..	..	..	..	..	..	1
Wisconsin	25–32	27	33	22	27	10	16	2	7	5	1	6	2	158
Unknown	.....	..	..	2	..	..	..	1	1	..	..	..	2	6
Total	.....	67	72	67	80	84	114	85	92	95	157	73	38	1 024

to do business on a quick turnover and sure-margin basis rather than to assume the speculative risks inherent in storage; and (2) that the use of trucks in transport increases the hazard of storage since it forces price adjustments to be made more quickly.

Of course, in years of large yields there is a tendency for a larger volume to be marketed at time of harvest. Thus in 1935, when the late potato area had a large crop, the marketing agencies pushed potatoes, and the large volume placed on the market reduced the retail price for U. S. No. 1 at Peoria to one cent a pound for a considerable time.

Market Supplies Obtained From Wide Area

The wide area from which potatoes are shipped to Peoria is indicated in Table 18. Thirty-one states made shipments to this market

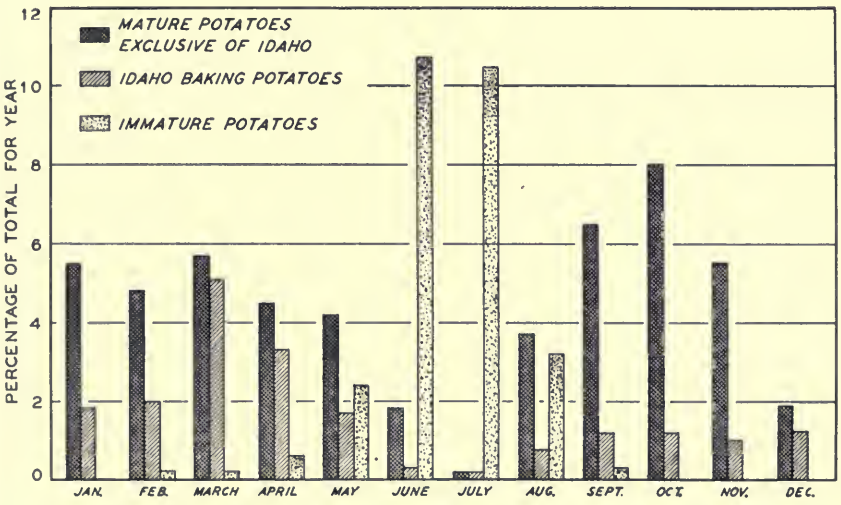

FIG. 9.—RELATIVE IMPORTANCE OF DIFFERENT TYPES OF POTATOES ON THE PEORIA MARKET, BY MONTHS, 1934

Potatoes from late-producing regions other than Idaho were the most important source of supply in all months except June and July, when new potatoes made up the bulk of the receipts.

in 1935. The transportation charges on these shipments ranged from 23 to 96 cents a hundredweight. The areas with the higher rates must have some particular advantages, such as quality of produce, season of production, or very low production costs, to compete for the market. Potatoes from Wisconsin, North Dakota, Minnesota, and Michigan are

on the Peoria market at almost all seasons of the year. Minnesota, with a large crop, supplied a total of 225 carloads, or about one-fifth of the total supply. Idaho, with a transportation charge ranging from 64 to 81.5 cents a hundredweight, furnished 106 carloads, or 10 percent of the total supply. The high quality of the Idaho potatoes and the demand for them for special uses made this possible.

Potatoes from the early potato sections (immature or new potatoes) were received at Peoria from February to September, with a high peak during June and July (Fig. 9). Idaho potatoes were on the market the year round, supplies reaching a high peak during March and a low point in June and July. Mature potatoes other than those from Idaho were upon the market the year round, with a low point in July and a high peak in October.

This large number of places of origin illustrates how competition for a large consuming market develops among widely separated growers. The wide sources from which other fresh fruits and vegetables are drawn for the Peoria market is shown in Table 4, page 68.

MARKET CHARACTERISTICS OF LOCAL PRODUCE

It is estimated that an equivalent of 276 carloads of local fresh produce was sold on the Peoria market during the season of its production in 1935 (Table 3, page 66). This is 9 percent of the total fresh produce (3,201 carloads) used in the Peoria consuming area during the months when local produce is available. During this period local growers supplied 10 to 100 percent of the demand for the different fruits and vegetables used (Table 3).

The local vegetable production around Peoria, like that around other cities in Illinois, developed to supply the local market with fresh produce at a time when competition from other areas was almost unknown. With changed conditions which made produce from many producing sections available to consumers, local producers find themselves fighting for the market.

For some crops such as cauliflower and cantaloups, supplies of which are uncertain because of their high dependence on weather conditions, the importance of the local production will vary greatly from year to year. In 1935 the local cauliflower crop was very good and during the production season supplied a large part of the local demand. Likewise the quality of locally grown cantaloups was very good in 1935, and they completely filled the local demand. In years when the quality of local cantaloups is poor, distant-producing areas employing the process of picking vine-ripe melons and waxing them

so as to give the consumer high quality will compete strongly for the local market.

Locally grown beans completely supplied the market in season except when adverse weather conditions reduced the supply. The same was true of peppers. The quality of the locally grown tomatoes was not sufficiently high at times to meet consumers' demands for tomatoes for slicing.

Locally grown carrots at Peoria seldom had the sales appearance to compete successfully with bunched carrots from distant areas. Also, retailers complained that local bunch carrots wilted and became unsalable in a very short time.

The small-podded peas, which made up most of the local pea production, did not meet the preferences of many consumers. Their preference was for the large-podded peas, because of appearance, time needed to prepare them, or because of flavor. Locally grown peas were likely to be picked when too mature for best eating qualities.

Radishes are used by many consumers chiefly as a decorative article or relish, and therefore size and color are very important. For this use the local radishes as marketed can seldom compete with radishes from some of the other areas.

Those kinds of vegetables which can be grown locally to advantage have little direct competition on the local market from vegetables grown in other areas. Prices are usually lowest during the season when local produce is on the market (Table 19, Appendix). Low prices at this time cannot always be explained by the volume of produce on the market; the practice of selling ungraded produce and the sales methods used by local growers are important factors in determining price.

THE PEORIA CENTRAL MARKET

Local produce has frequently developed special marketing facilities, and this has been true at Peoria, where the Peoria Central Market is a long-established institution. At the time of this survey the Peoria Central Market was the principal outlet for locally produced fresh vegetables and fruits, altho considerable local produce was sold by growers who peddled it from store to store, and a comparatively small amount was handled directly by wholesale dealers. The discount given these dealers by the growers was not sufficient to induce the wholesalers to push the sale of local produce.

The Peoria Central Market is maintained by the city as a convenience to local producers and to retailers. As the market is now operated it is very largely on a wholesale basis.

Operation of the Market

The Peoria Central Market is located on the river front at the foot of Fayette street[1] and is supervised by a market master appointed by the city. During the marketing season of 1935, the market was in operation from 4 a.m. to 8 a.m. Tuesdays, Thursdays, and Saturdays were the more important market days. The market was essentially a wholesale market. However, the unit of sale was relatively small and frequently families purchased wholesale units.

There were two principal classes of sellers on the market: (1) growers who sold their own produce; and (2) transient trucker-dealers, who purchased their produce from local growers or on other markets. The producers made up by far the majority of the sellers.

During the 1935 season the city of Peoria imposed a tax of $100 on the transient trucker-dealers. The payment of this tax gave the party permission to sell within the city limits, but if he wished to make use of the city market he had to pay the market fee in addition, as assessed by the market master. This $100 tax greatly reduced the number of transient truckers that used Peoria as a market.

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[1]A brief history of the Peoria Central Market is of interest because of the light it throws upon the local vegetable industry. This market was built by the city in 1850 at the center of what is now the 100 block, North Washington street. The market shed was a block long, and here fruits, vegetables, farm products, coal, wood, and grains were offered for sale directly to consumers.

In 1858-59 the market site was moved to South Madison and Fulton streets. Here the city erected a building measuring 150 by 150 feet. It was set back 40 feet from the curb; the space between it and the curb was paved and covered by a roof on the Madison and Fulton street sides. This space gave room for two rows of stalls with a large walk between. These stalls were used exclusively by market gardeners and farmers. The inside of the building was reserved for butchers and gardeners during the winter. The market was under the supervision of the city and was operated daily except Sunday from 4 a.m. to 11 a.m., with the exception of Saturday, when the market remained open until 11 p.m. The market was zoned by an area 10 blocks in each direction from the market site, within which it was unlawful to offer for sale any market produce during the regular market hours or to establish butcher shops.

The zoning ordinances protecting the market were repealed in 1885, and the market building was destroyed in 1897 to permit the erection of a city hall.

In 1898 a group of growers formed a stock company and erected a market building at Madison, Liberty, and Franklin streets. This market was protected by a one-block zoning ordinance which provided for the collection of a fee from each seller in the area. This market was very successful for a number of years. In 1915, however, the market was sold to the city with the understanding that the city would maintain a market for the growers. In 1922 the market was removed to the levee district and later to its present site. (From "Sixty Years of Marketing Fruits and Produce on the Peoria Market," by G. F. Shoff, in *Transactions of the Illinois State Horticultural Society,* n. s. **46**, 140-144, 1912; and from unpublished records of the Market Gardeners' and Fruit Growers' Association of Peoria and vicinity.)

Growers who used Peoria as their regular marketing headquarters paid a market fee of 25 cents a day per stall. A seller could lease stalls for a longer period and so have a regular place upon the market. Growers who did not make Peoria their regular market headquarters could use the market at any time by paying a fee of 25 cents to $5, depending upon the value of the load. The market master determined this fee.

No attempt was made by those in charge of the market to furnish the sellers and buyers with information regarding prevailing market prices, amount of produce on the market, or general market conditions. No records were kept as to the number of sellers and buyers or the amount of produce passing thru the market.

The number of sellers on the market varied during the period of this study from 20 to 130 daily. Early in the season the sellers were very largely market gardeners who grew a large variety of crops. Later, growers of special crops such as berries, tomatoes, sweet corn, beans, melons, and sweet potatoes, greatly swelled the number. Most of the growers did not sell more than one load of produce a day, altho a limited number of the larger producers sometimes handled two or more loads per market period.

The present market site has a very limited area and it is hard to enter. It is located some distance from the state highways, and to enter the market it is necessary to cross a number of railway tracks over which much switching is done during market hours.

The most important groups of buyers upon the market were retail storemen, peddlers, and a relatively small number of wholesale dealers. The retail store buyers were by far the most important group, including the largest and most regular buyers. A few buyers in this class came from outlying towns. These went to the Central Market and purchased their needs so far as supplies were available, then proceeded to the wholesalers to purchase items not available on the Central Market. The peddlers have in the past been a more important group of buyers than they were during the 1935 season. A city peddlers' tax made effective early in that season restricted their activities. The wholesale buyers who used the market were as a rule transient trucker-buyers and could not be relied upon as a regular outlet. They were small buyers without any well-established outlet for the produce they purchased.

A few buyers representing eating establishments used the market; but their purchases were not very important. In fact, the amount of local produce which they used, as shown in Table 15, page 89, made up a relatively small part of their total purchases.

Seasonal Appearance of Different Items

The season during which the various vegetables were offered for sale upon the Peoria Central Market is shown in Fig. 10. Some very early local vegetables were available before the opening date indicated, but the volume was not sufficient to warrant the opening of the Central Market. Likewise, there was a small quantity of produce offered for sale thru the market after the date indicated. The dates at which the

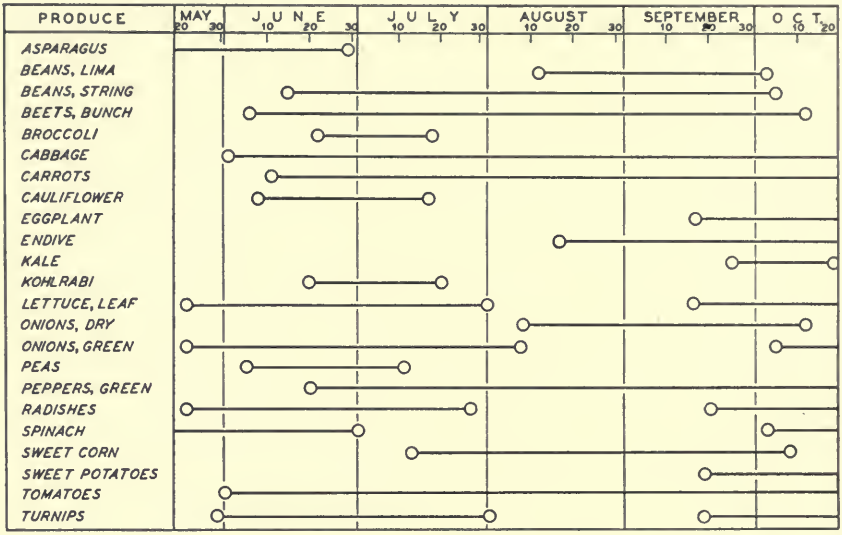

FIG. 10.—PERIODS WHEN DIFFERENT KINDS OF PRODUCE WERE ON THE PEORIA CENTRAL MARKET, 1935

The season during which most items of produce were on the Peoria Central Market in 1935 was usually the season of local production. Tomatoes, cabbage, and cauliflower were exceptions.

market opens in the spring or closes in the fall are dependent upon weather conditions. The market remained open for a time after October 16 in 1935, but data were not collected as to the produce offered for sale after that date. There was a killing frost on October 3, which destroyed all but the most hardy vegetables, and the activities of the market were greatly curtailed at that time. Many of the buyers left the market, and growers were forced to use other outlets for their more staple products.

The season during which some particular kind of produce was on the market was usually the season of its local production. There were

a few exceptions, however. Tomatoes, cabbage, and cauliflower were trucked in from southern regions, while celery was trucked in from Michigan. Where crops were carried later than their normal season, the late offerings were of inferior quality; asparagus, rhubarb, radishes, and leaf lettuce were examples.

Quality of Produce

No unified attempt has been made by sellers to establish a uniform grade or pack for produce sold on the Peoria Central Market. The quality of the produce of one grower may be very good, that of another only fair, and that of another inferior; yet all this produce is likely to appear upon the market as field run. Such a practice, along with the lack of market information, limits the number of wholesale buyers who can use the market effectively, and tends to demoralize prices when supplies are abundant.

Prices Obtained for Produce

The price obtained for an item of produce on the Central Market during the 1935 season was determined by the time of its appearance and by the supply.[1] The range in price for most items was not to be explained by variations in quality, green beans being a possible exception. The seller's ability as a salesman was one of the most important factors in determining the price obtained for his produce. This was to be expected upon a market where the ratio of sellers to buyers was quite narrow and where there was no general source of information regarding prevailing prices and supply.

Frequently it was found that the unit offered for sale was not uniform as to size. Asparagus, green onions, and rhubarb, for example, were sold by the dozen bunches, yet there was no recognized standard for a bunch. Frequently the size of bunch varied greatly within an individual grower's pack as offered at a given time, usually because of the grower's own carelessness. Many sellers, however, increased the size of their bunches to overcome inferior quality or otherwise increase their volume of sales. It was common to see the quantity offered by a given grower as a unit of purchase—for example, a bushel of spinach, leaf lettuce, or cabbage—increase as the supply became plentiful and the price dropped, with the result that on a given day the contents of the same units might vary 50 percent in weight. Here again a shrewd

[1]The data showing the retail price range for the items of produce thruout the time of their appearance upon the market are given in detail in Table 20, Appendix.

wholesale buyer could effect a big saving by giving attention to the amount of produce included in a unit.

It was generally recognized upon the market that the retail price on much of the produce would be twice the wholesale price. Thus radishes at 15 cents a dozen bunches would retail at 2 bunches for 5 cents. Carrots and beets at a wholesale price of 20 cents a dozen bunches would retail at 3 bunches for 10 cents. The salesman recognized this margin and usually made his price such that the retail storeman could make a convenient retail price at twice the wholesale price.

Desirable Improvements

The prices at which vegetables sold on the Peoria Central Market very largely determined the price of local vegetables sold thru other channels. Practically speaking, the Peoria Central Market catches the local producers' overflow. That is, the growers bring to the market the produce for which they do not have orders. The practice of taking orders tends to reduce the number of buyers who might use the market and leaves it more or less to the shopper who is hunting a bargain and is doing his best to beat down prices. With a large number of sellers on the market, and with no source of market information, the buyers have an excellent chance to purchase at a very low figure. These market prices then become the prices which the retail men who place orders with the growers expect to pay.

If the Peoria Central Market is continued, a market agency to report the quantity of the various items of produce on the market and market prices would do much to improve conditions in this market. With such a service it is reasonable to assume that prices would more nearly parallel quality.

If it is desired to increase the sale of local produce to outside markets, the bringing in of produce from distant markets should be encouraged rather than discouraged. This would create a regional market and draw buyers from outside points which cannot have wholesale stocks of produce to compare with those in Peoria. Local growers should also attempt to pack a uniform quality of produce, so that a distant buyer can purchase from a number of producers and still have a load which is uniform in quality.

The present location of the Peoria Central Market is not desirable for such a regional market. Truckers object to the crossing of railroads and to the cramped area. The ideal location for such a market would be in a place where both local producers and wholesale dealers could operate in a unified way.

CHANGES IN THE PEORIA MARKET IN 1936

A few noticeable changes in the Peoria market have taken place since the major part of this study was completed in 1935. The carlot wholesale dealers tended in 1936 to rely more heavily upon truck transportation to supplement their main source of produce. Especially was truck service used to bring in supplies from neighboring producing areas and to bring from distant areas highly perishable products used in comparatively small quantities. The latter were purchased on other markets, either Chicago or St. Louis.

The season of 1936 was unfavorable in the Peoria area for both quality and quantity production of local produce, because of drouth and extremely high temperatures, with the result that the local supply for 1936 was much smaller than in 1935. The Peoria Central Market during the early part of the 1936 season was not nearly so important an outlet for local produce as it was in 1935. The reduced local supply caused a larger number of retail storemen to place orders with the growers in advance rather than to run the risk of being unable to purchase their needs upon the Peoria Central Market.

This practice of placing orders with the growers weakened the Peoria Central Market in two ways. It reduced still further the amount of produce on the market and it reduced the number of buyers that used the market. This was probably injurious to the welfare of the local vegetable growers because the Peoria Central Market became inactive, yet the prices at which produce sold on that market determined the prices paid by the storemen who placed orders direct with a producer.

Later in the season some of the local wholesale dealers established themselves upon the Peoria Central Market. This tended to attract a larger number of buyers and thus strengthened the market for local produce.

During a portion of the season, quality produce of a given kind, such as tomatoes, was in the hands of a very limited number of growers, and a much inferior quality was in the hands of others. Under these conditions the quality produce brought a price in proportion to its value. This was quite different from conditions found on the market during the season of 1935, when the number of local growers with good produce was larger and there was little premium for quality because the supply of good produce was divided among so many growers.

SUMMARY OF THE SITUATION

Peoria a Leading Vegetable-Producing Area.—Six of the twenty leading vegetable-producing counties in Illinois owe the importance of their vegetable industries primarily to the production of cannery crops, one to the production of vegetables for distant markets, and the remaining thirteen jointly to the production of vegetables for a local market and for the canneries.

Most of the leading Illinois consuming markets receive their local vegetable supplies from one of the twenty leading vegetable-producing counties of the state. These local vegetable-producing areas have developed along with the growth of the cities, to supply the latter with fresh produce. During the early development of these markets, economical production was not so essential as variety of produce. However, as improved methods of transportation and large-scale vegetable production developed in distant regions, products from such areas began to compete upon the markets with local produce. From this time on, economical production and quality became of first importance. Many of the distant regions have developed a reputation upon Illinois markets for quality and standardized packs along with reasonable prices. To date, the local vegetable producers have not adjusted their operations to meet this competition.

The acreage devoted to vegetable crops in Illinois more than doubled during the period from 1919 to 1929, while the acreage of those crops grown for the fresh-vegetable market increased by only 48 percent. Between 1929 and 1934 the total acreage further increased by 25 percent. Between 1919 and 1929 the location of the acreage within the state shifted greatly, increasing in some counties and declining in others. In the Peoria area, that is, Peoria, Tazewell, and Woodford counties, the acreage of crops grown for the fresh-produce market was increased from 1919 to 1929 by 117 percent. Practically all this produce was marketed locally. During the same period the population of Peoria increased by only 35 percent.

Development of Peoria Market.—The city of Peoria had in 1930 a population of 105,000; the retail-trade area, with a 37-mile radius, had a population of 250,000; and the wholesale area, with a 60-mile radius, had a population of 740,000.

In 1935 there were in Peoria thirteen wholesale establishments dealing in fresh fruits and vegetables, two chain-store warehouses from which fresh produce was distributed, and a producers' wholesale market maintained by the city. A few of the wholesale establishments dealt largely in carlot receipts, altho receipts by truck were used to

supplement these. A number of the wholesale establishments were small concerns dealing principally in truckload lots. Some of these did not attempt to carry a definite line of produce, but dealt in whatever they thought to be a good purchase.

Volume of Market Receipts in Peoria.—A total of 2,605 carloads of fresh fruits and vegetables were unloaded in Peoria during 1935. These came from thirty-seven states and several foreign countries. Estimated receipts by truck in 1935 amounted to an equivalent of 459 carloads from distant points and 276 carloads from local growers.

Peoria Retailing Agencies.—In 1935 Peoria had 416 retail stores which carried fresh produce. A few of these dealt only in fresh produce, but the majority were grocery stores handling fresh produce. Ninety-three of these were units of retail chains and 323 were independent retail stores.

The number of kinds of fresh produce stocked in stores varied greatly, depending upon the income of the store's patrons. Retail stores whose patrons were of the high-income groups stocked as complete a line of fresh produce as was available, while those with patrons of the lower-income groups reduced the variety of their stock during seasons when certain produce was high in price.

Retail Prices.—The price of a given quality of produce varied greatly among Peoria retail stores in 1935. The wide differences were frequently caused by some store or stores using an item as a leader when others were carrying it as a profit-making or service item.

There was no system in common use to determine the margin which a retail store needed in order to handle a given item of produce. Such items as strawberries were handled commonly upon a very narrow margin, while others were sold on a much wider margin. As a rule, retailers took a larger margin on local produce than on standardized produce from distant regions.

Family Income and Fresh Produce Used.—A consumer survey, covering 4 percent of the families in the city of Peoria, indicated that the amount of fresh produce used was not greatly influenced by family income. There was, however, a connection between family income, the kind of produce, and the season of its use. Families in the low-income group used largely the more bulky vegetables, such as cabbage or carrots, during the winter months, and they used very little of such crops as peas and sweet corn even during the season of local production. Families in the higher-income group used the seasonal crops, such as strawberries, as soon as available, and then used them lightly, if at all, when the local berries were on the market.

Need for Education on Quality Produce.—One of the significant facts brought out by the consumer survey was the lack of information on the part of consumers with reference to what constitutes quality in fresh produce. Producers in general do not come into direct contact with consumers. Retail dealers are the connecting link. They have an opportunity on the one hand to educate producers as to the importance of well-graded produce of good quality, and on the other hand, by proper advertising and display of goods, to teach consumers how to purchase produce on the basis of quality, including such items as flavor, food value, and adaptation to particular uses, as well as appearance. Dealers also need education; the study brought out the fact that retail storekeepers were frequently not capable of determining quality other than in a very superficial way.

Sources of Produce Used by Consumers.—City consumers grew an average of 5 percent of their fresh vegetable supply, all of which competed directly with local produce grown for sale, as it was available at the same season.

Over 85 percent of the fresh fruits and vegetables purchased by Peoria families was bought at retail stores. The street peddler was the second most important source, accounting for about 6 percent, followed by direct purchases from farmers and roadside markets.

Home Canning.—The home canning of fruits and vegetables was not limited to families of any one income group. Forty-six percent of the families interviewed canned some vegetables and 53 percent canned some fruit.

Potato Consumption and Units of Purchase.—The average potato consumption per person in Peoria was about 10 pecks a year in 1935. The people in the lower-income groups tended to use more potatoes than those in the higher-income groups. Potatoes were one of the largest items of fresh produce which people purchased, yet 46 percent of the people in Peoria had no variety preference.

Eighty percent of the families interviewed purchased their potato supply in peck lots; more than 3 percent purchased in even smaller quantities. This practice of consumers to purchase a quantity that would last only a short time extended also to retailers and wholesale dealers, and applied to other items as well as potatoes.

Fresh Produce Used by Public Eating Establishments.—There were 238 public eating establishments in Peoria in 1935. The importance of fresh vegetables among the food items served varied greatly among these establishments. The method of purchasing fresh prod-

uce varied, but a large part of it was obtained from wholesale dealers and less than 10 percent directly from local dealers.

Marketing of Locally Grown Produce.—Many kinds of locally grown fruits and vegetables control the market while they are in season. The local produce entering the Peoria retail channels during the 1935 season was estimated to be equivalent to 276 carloads, which was 9 percent of the total supply for the year.

Only a small percentage of the locally grown produce went thru the regular wholesale establishments. A considerable quantity was delivered directly to the retail stores. The city maintained the Peoria Central Market where much of the local produce was sold to retail storemen, peddlers, dealers, and other marketing agencies.

Lack of Market Standards and Market Information.—The Peoria Central Market is maintained by the city as a market for local producers. It was operated in 1935 as a wholesale market from 4 a.m. to 8 a.m. each week day during the summer months. No unified attempt has been made to establish a uniform grade or pack for produce offered for sale on this market or to furnish buyers or sellers with information as to supplies and prevailing prices. The ratio of buyers to sellers is small and under the prevailing conditions quality produce seldom receives the price it deserves in relation to inferior produce. The buyers on the market chiefly represent retail stores, street and roadside markets and peddlers, and buy in small quantities.

RECOMMENDATIONS

On the basis of the facts developed by this survey of the Peoria fresh-fruit and vegetable market, the following recommendations are submitted for the consideration of those interested in improving this market:

1. The Peoria Central Market should be moved to a larger and more accessible location.

2. Local wholesalers should be encouraged to locate in close proximity to the new site of the Peoria Central Market. Such a change would add to the convenience of all buyers and would attract additional buyers, thus making a better market for local produce.

3. Growers should standardize their packs of produce as to quality, quantity per unit, and kind of containers, so that a buyer can purchase from a number of growers and still have a uniform lot of produce, and so that prices can be reported on a uniform basis.

4. A service should be established to inform buyers and sellers as to quantity and quality of produce available for the market and to report market prices. This service should make frequent reports of the condition of local crops, time of harvest, and estimated supplies, together with reports on outlets for such produce.

5. Growers should give special attention to those crops which each can grow to best advantage when quality, cost per unit, and sales value are considered.

6. A program of education should be developed that will inform consumers as to the meaning and significance of quality in fruits and vegetables. Such a program should start with the education of retail storekeepers, for many of them need this information themselves and all of them are in position to give effective information to their customers.

APPENDIX

TABLE 19.—RANGE IN WEEKLY RETAIL STORE PRICES IN PEORIA, FOR DESIGNATED WEEKS, 1935
(All prices in cents)

Week ending	Asparagus	Beans, snap	Beans, lima	Cabbage	Carrots	Corn, sweet	Lettuce	Onions	Peas	Peppers	Potatoes	Radishes	Spinach	Sweet potatoes	Tomatoes
	bunch	*pound*	*pint*	*pound*	*bunch*	*dozen*	*head*	*bunch*	*pound*	*each*	*peck*	*bunch*	*pound*	*pound*	*pound*
May 26....	5–10	7.5–12.5	.....	2.5 –8	4 –7.5	.....	7 – 9.5	2.5–5	6.5– 9	5	29–60	2.5–7.5	7.5 – 8.33	.....	12.5–23
June 2....	5–10	7.5–12.5	.....	2.5 –5	5 –7.5	.....	5 – 9	3.3–5	7 –12.5	7.5	29–50	2.5–3.3	5 – 8.33	.....	7.67–18
9....	5–7.5	7.5–12.5	.....	3.3 –5	4.5–7.5	.....	6 – 7.5	3.3–5	5 –12.5	5	29–60	2.5–3.3	6.33– 8.33	.....	7.5–15
16....	5–7.5	6.5–10	.....	2 –5	3.3–8.0	.....	4.5– 8.5	3.3–5	5 –10	5	34–45	2 –7.5	5 – 7.5	.....	9.5–12.5
23....	5–7.5	4.5– 7.5	.....	2 –5	3.3–7.5	.....	4.5– 7.5	3.3–4	4.5– 8.5	5	34–41	2.5–3.3	5 – 8.3	.....	7.5–12.5
30....	7.5	7.5– 8.25	.....	2 –5	5 –7.5	60	5 – 7.5	3.3	5 –10	3.3	26–41	3.3–5	7.5	.....	10 –15
July 7....	5	3.3–10	.....	2 –4	5 –7.5	50 –60	5 –10	3.3	9.5–12.5	5	25–40	2.5–3.3	7.5	.....	7.5–12.5
14....	10	4.5– 8.25	.....	1.75–4	3.5–7.5	29 –40	9.5–15	3.3	9.5–12.5	5	25–30	3.3–5	7.5 –10	4.75–5	7.5–10
21....	.....	5 – 8.25	.....	1.75–5	4.5–7.5	30 –40	5 –10	3.3	8.3–12.5	5	19–25	5 –8	7.5 –10	5 –6.3	7.5–12.5
28....	.....	6.5– 9.5	.....	2 –4	5 –7.5	15 –30	5 –10	2.5–3.33	12.5	5	17–29	5 –7.5	7.5 –10	3.3 –6.3	2.5–10
Aug. 4....	.....	5 –10	.....	2.5 –5	5 –7.5	15 –30	5 –10	3.3	11.5–12.5	3.3	19–39	5 –7.5	7.5 – 8.3	3.3 –6.3	5 – 7.5
11....	.....	7.5–10	17 –25	2 –4	6.5–7.5	12.5–25	6.5–10	3.3–4.5	8.3–12.5	3.3	19–37	3.3–7.5	7.5	3.3 –6.25	2.5– 7.5
18....	.....	7.5–12.5	10 –25	2.5 –4	3.3–7.5	14.5–25	5 – 9.5	3.3	7.5–12.5	3.3	19–37	5 –7.5	7.5	3.5 –7.33	2.5– 5
25....	.....	5 –10	25	3 –5	5 –7.5	15 –25	7.5–10	.....	6.5–12.5	3.3	17–37	5 –7.5	12.5	3 –6.67	2.5– 5
Sept. 1....	.....	6.5–10	23 –25	2.5 –4	3.3–7.5	19 –29	5 – 7.5	.....	6.5–12.5	2.5	17–37	2.5–5	7.5 –12.5	3.3 –6.33	2.5– 5
8....	.....	3.3–10	10 –20	2.5 –4	3.3–7.5	12 –25	5 –10	.....	8.3–12.5	3.3	17–28	2.5–5	10 –12.5	3.3 –6.25	3 – 5
15....	.....	3.3– 7.5	7.5–15	2 –5	5 –7.5	18 –24	4.5– 7.5	.....	7.5–12.5	2.5	16–27	3.3–5	7.5 –12.5	2.5 –6.33	2.5– 7.5
22....	.....	3.3– 7.5	10 –15	1.5 –4	3.3–7.5	15 –20	4.5– 7.5	.....	.....	2.5	16–25	4 –5	3.3 –10	2.25–6.33	2.5– 5
29....	.....	3.3– 7.5	7.5–15	1.5 –4	4.5–7.5	19 –24	5 –10	.....	.....	3.3	18–25	3.3–5	6.5 –10	2.5 –6.25	2.5– 5
Oct. 6....	.....	5 – 9.5	15 –17.5	1.25–4	6.5–7.5	.....	4.5– 8.5	.....	.....	2.5	17–29	2.5–5	4.75–10	2.5 –6.25	2.5– 5
13....	.....	12.5–15	.....	2.5 –4	5 –7.5	.....	5 –10	.....	.....	2.5	16–25	3.3–5	3.3 –10	2.5 –6.25	5 –75

TABLE 20.—RANGE IN PRICES OF PRODUCE, PEORIA CENTRAL MARKET, ON DESIGNATED DATES, 1935
(All prices in cents)

Date	Asparagus	Cabbage	Carrots	Cauliflower	Celery	Corn, sweet	Cucumbers	Beans, lima	Beans, snap	Beets	Broccoli	Eggplant	Endive	Lettuce, head
	bunch	*bushel*	*bunch*	*dozen head*	*dozen stalks*	*5-dozen bags*	*bushel*	*quart*	*bushel*	*dozen bunches*	*dozen bunches*	*bushel*	*dozen plants*	*dozen head*
May 21	50–75	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
23	40–50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
28	40–75	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
June 1	35–50	100	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	40
4	33–45	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	40
6	30–45	.....	.....	.....	.....	.....	.....	.....	.....	40	.....	.....	.....	40
8	33–50	.....	.....	.....	.....	.....	.....	.....	.....	30–40	.....	.....	.....	.....
11	40–50	75	40	100–150	.....	.....	.....	.....	.....	30–40	.....	.....	.....	30–40
13	30–40	65	40	150	.....	.....	.....	.....	.....	25–40	.....	.....	.....	20–30
18	25–40	50–65	40	125	.....	.....	.....	.....	150	35–40	.....	.....	.....	30
20	30–40	50–75	40	.....	.....	.....	.....	.....	120	30–40	.....	.....	.....	35
22	33–35	60–75	35–45	100	.....	.....	.....	.....	125–135	35–40	70	.....	.....	35
25	.....	60–75	40	.....	.....	.....	.....	.....	125	30–35	.....	.....	.....	.....
27	.....	50–70	30	100–125	.....	.....	.....	.....	.....	20–30	.....	.....	.....	30
29	33–40	50–70	.....	125	.....	.....	.....	.....	100	25–30	70	.....	.....	30
July 2	.....	50–60	25	100	.....	.....	.....	.....	75–100	25	.....	.....	.....	30
6	.....	50–60	20–25	100	35–40	.....	.....	.....	75–140	20–25	40–50	.....	.....	.....
9	.....	50	20–25	50	.....	.....	.....	.....	75–100	20–25	40–50	.....	.....	.....
13	.....	35–50	.....	50– 60	25	125–225	.....	.....	75–100	20–25	35–50	.....	.....	.....
17	.....	30–50	15–25	50– 60	25–40	125	.....	.....	75–100	20	40	.....	.....	.....
20	.....	33–50	20–25	.....	40	100–115	.....	.....	100–125	20–25	.....	.....	.....	.....
23	.....	.....	.....	.....	.....	100	.....	.....	125–150	20	.....	.....	.....	.....
25	.....	33–50	20–25	.....	.....	100	.....	.....	125–140	20	.....	.....	.....	.....
27	.....	33–40	20–25	.....	25	90–125	.....	.....	100–125	20	.....	.....	.....	.....
29	.....	30–40	20	.....	.....	75–100	.....	.....	125–150	20	.....	.....	.....	.....
Aug. 1	.....	33–40	20	.....	.....	90–100	.....	.....	100–150	20	.....	.....	.....	.....
3	.....	.....	.....	.....	.....	70– 75	.....	.....	100–150	.....	.....	.....	.....	.....
6	.....	33–50	20	.....	.....	50– 80	125	.....	100	20	.....	.....	.....	.....
8	.....	.....	20	.....	.....	50	80–125	.....	100–115	20	.....	.....	.....	.....
10	.....	33–45	20	.....	.....	50– 75	.....	.....	100–110	20	.....	.....	.....	.....
12	.....	33–45	20	.....	.....	50– 60	80	40–45	125–140	20	.....	.....	.....	.....
17	.....	40–50	20	.....	.....	50– 60	.....	25–35	140	15–25	.....	.....	.....	.....
20	.....	50	20	.....	40	50	80	35	140–165	20	.....	200	.....	.....
24	.....	50	.....	.....	30	40– 60	60– 75	.....	160	20	.....	225	.....	.....
27	.....	.....	.....	.....	.....	40– 60	50– 65	30–35	135–150	20	.....	.....	.....	.....
29	.....	.....	20	.....	.....	40– 60	50– 60	25–35	140–165	20	.....	.....	.....	.....
31	.....	40–50	15–20	.....	.....	40– 60	50– 65	30–40	150–160	15–20	.....	.....	.....	.....

TABLE 20.—*Continued*

Date	Asparagus	Cabbage	Carrots	Cauliflower	Celery	Corn, sweet	Cucumbers	Beans, lima	Beans, snap	Beets	Broccoli	Eggplant	Endive	Lettuce, head
	bunch	*bushel*	*bunch*	*dozen head*	*dozen stalks*	*5-dozen bags*	*bushel*	*quart*	*bushel*	*dozen bunches*	*dozen bunches*	*bushel*	*dozen plants*	*dozen head*
Sept. 3	.....	.....	20	.....	.....	75	70– 75	.....	.....	20	.....	.....	.....	.....
5	.....	70–85	.....	.....	.....	75	.....	35	100–115	.....	.....	140	.....	.....
7	.....	50	20–25	.....	.....	50– 60	90–100	35	100–125	20	.....	200	.....	.....
12	.....	50	20–25	.....	.....	50– 60	65– 85	25–30	50– 85	20	.....	175	.....	.....
14	.....	50	25	.....	.....	50	65– 75	25	75– 90	25	.....	150	.....	.....
19	.....	50	20	.....	.....	.....	50–100	20	75	20	.....	.....	60	.....
21	.....	50	20	.....	.....	50– 60	.....	15–17.5	55– 75	20	.....	75	60	.....
26	.....	.....	20	.....	30–40	50– 60	75	12.5–15	60– 75	20–25	.....	75–100	.....	.....
28	.....	50	20	.....	.....	50– 60	75	15–20	50– 75	20–25	.....	100	60	.....
Oct. 3	.....	.....	.....	.....	.....	50– 60	90–125	20	75	.....	.....	75	.....	.....
5	.....	.....	20	.....	.....	50– 60	100–125	20–25	100	20	.....	75	.....	.....
10	.....	50	20	.....	.....	60	.....	.....	.....	.....	.....	150–160	.....	.....
12	.....	.....	20	.....	.....	60	.....	.....	.....	20–25	.....	110–125	.....	.....
15	.....	40–50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
17	.....	35–50	20–25	.....	30–40	.....	.....	.....	.....	20	.....	125–150	20–40	.....
19	.....	.....	20	.....	.....	.....	.....	.....	.....	20	.....	.....	40–50	.....

Date	Lettuce, leaf	Mustard	Onions, green	Onions	Peas	Peppers	Potatoes	Radishes	Rhubarb	Spinach	Squash, summer	Sweet potatoes	Tomatoes	Turnip
	10 lbs.	*bushel*	*dozen bunches*	*bushel*	*bushel*	*peck*	*bushel*	*dozen bunches*	*dozen bunches*	*bushel*	*peck*	*bushel*	*peck*	*dozen bunches*
May 21	.....	.....	.....	.....	.....	.....	.....	15–20	15–20	75	.....	.....	.....	.....
23	90	75	17.5–20	.....	.....	.....	.....	10–20	.....	75	.....	.....	.....	.....
28	65– 75	75	17.5–20	.....	.....	.....	.....	10–20	20	40– 75	.....	.....	.....	35
June 1	100	65–75	25–35	.....	.....	.....	.....	12.5–20	15–20	40– 75	.....	.....	.....	50
4	90–100	65	30	.....	.....	.....	.....	15–17.5	15–20	40– 65	.....	.....	.....	25–30
6	75– 90	50–65	20–30	.....	.....	.....	.....	12.5–17.5	15	50– 65	.....	.....	.....	30–35
8	60– 75	40–50	30–35	.....	200	.....	.....	10–15	15	40– 50	.....	.....	.....	30–40
11	50– 75	50	30–35	.....	200	.....	.....	10–15	15	40– 60	.....	.....	.....	25–35
13	50– 75	40–50	30	.....	160–200	.....	.....	.....	.....	40– 50	.....	.....	.....	25–30
18	40– 50	.....	25–30	.....	160	.....	.....	.....	15	40	.....	.....	.....	30–40
20	40	.....	30	.....	135–160	50	.....	.....	.....	30– 50	.....	.....	.....	25–30
22	50	40	25–30	.....	100–125	.....	.....	15	15	40	.....	.....	.....	25
25	40– 50	40	25	.....	100–125	50–75	.....	.....	.....	40– 50	.....	.....	.....	20–30
27	.....	40	20–25	.....	100	50	.....	15	.....	50	.....	.....	.....	20–25
29	40– 50	40	25–30	.....	100	.....	.....	.....	.....	50	.....	.....	.....	20

(Table is concluded on next page)

TABLE 20.—*Concluded*

Date	Lettuce, leaf	Mustard	Onions, green	Onions	Peas	Peppers	Potatoes	Radishes	Rhubarb	Spinach	Squash, summer	Sweet potatoes	Tomatoes	Turnip
	10 lbs.	*bushel*	*dozen bunches*	*bushel*	*bushel*	*peck*	*bushel*	*dozen bunches*	*dozen bunches*	*bushel*	*peck*	*bushel*	*peck*	*dozen bunches*
July 2	25– 35	25–50	22.5–25	.....	100–120	.....	.....	15	.....	40– 50	.....	.....	.....	15–25
6	35– 40	50	20–25	.....	.....	.....	.....	15	.....	50– 60	.....	.....	.....	20
9	35– 50	60	20–25	115	.....	.....	.....	10–15	.....	50	.....	.....	.....	20
13	35– 50	.....	20	100	.....	.....	.....	15	20–25	50	.....	.....	.....	20–25
17	35– 50	.....	10	.....	.....	.....	.....	.....	20–25	50	.....	.....	.....	15–20
20	.....	.....	.....	.....	.....	.....	.....	10–15	.....	100*	.....	.....	120	20
23	.....	.....	.....	.....	.....	.....	80	15	.....	75–100	.....	.....	75–100	20
25	.....	.....	.....	.....	.....	.....	.....	15	15–20	100	.....	.....	75–100	15–20
27	50	.....	.....	.....	.....	.....	.....	15	.....	75–100	.....	.....	60– 90	20
29	50	.....	.....	.....	.....	40–50	.....	.....	20	75–100	.....	.....	40– 50	15–20
Aug. 1	35	.....	.....	.....	.....	35–50	.....	.....	.....	75	.....	.....	50– 75	.....
3	.....	.....	.....	.....	.....	30–40	.....	.....	.....	75	.....	.....	50	.....
6	.....	.....	.....	.....	.....	35	75	.....	.....	.....	.....	.....	25– 50	.....
8	.....	.....	.....	.....	.....	35	75–90	.....	.....	.....	.....	.....	25– 50	.....
10	.....	.....	.....	.....	.....	25–35	75–90	.....	.....	75	.....	.....	20– 35	.....
12	.....	.....	.....	.....	.....	25–30	75	.....	.....	.....	50	.....	20	.....
17	.....	.....	.....	125	.....	.....	90	.....	.....	.....	50	.....	20	.....
20	40	.....	.....	100–125	.....	30–35	80–90	15–20	.....	60– 75	.....	.....	20	.....
24	.....	.....	.....	125	.....	25–30	75	.....	.....	60– 75	.....	.....	20– 25	.....
27	.....	.....	.....	100–125	.....	25–30	.....	.....	.....	.....	.....	.....	20– 25	.....
29	.....	.....	.....	100–125	.....	20–30	.....	.....	.....	.....	.....	.....	20– 25	.....
31	.....	.....	.....	.....	.....	25	.....	.....	.....	.....	40–50	.....	20– 30	.....
Sept. 3	75	.....	.....	75–100	.....	.....	80	.....	.....	.....	.....	.....	25– 35	.....
5	.....	.....	.....	100–125	.....	.....	75–80	.....	.....	.....	.....	.....	25– 35	.....
7	.....	.....	.....	100–125	.....	.....	.....	.....	.....	.....	.....	.....	25– 35	.....
12	.....	.....	.....	100–125	.....	.....	.....	.....	.....	.....	.....	.....	25	.....
14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	20– 25	.....
19	60	.....	.....	.....	.....	20–25	.....	.....	.....	75	25–40	.....	15– 25	20
21	60	.....	.....	.....	.....	20	.....	20	.....	50–100	25	80–85	.....	.....
26	75	.....	.....	.....	.....	20	.....	15–20	.....	50–100	20–25	.....	20	.....
28	.....	.....	.....	.....	.....	20–25	.....	.....	.....	100	25	75–85	20– 25	.....
Oct. 3	.....	.....	.....	.....	.....	20	.....	20	.....	90	20	75–80	25	.....
5	75	.....	.....	75	.....	20	.....	20	.....	90	20	70–90	25	.....
10	40	.....	.....	.....	.....	.....	.....	17.5	.....	.....	.....	.....	35– 60	40
12	.....	.....	.....	100	.....	.....	.....	17.5	.....	.....	.....	60–90	.....	.....
15	.....	.....	.....	100	.....	.....	.....	15	.....	.....	.....	.....	.....	.....
17	.....	.....	.....	.....	.....	.....	.....	15	.....	60– 75	.....	50–75	.....	.....
19	.....	.....	.....	.....	.....	.....	.....	.....	.....	60– 75	.....	50–75	60	20

*New Zealand spinach from July 20 to August 24.

QUESTIONNAIRES USED IN STUDY

I. CONSUMERS' DEMAND SCHEDULE FOR VEGETABLES

UNIVERSITY OF ILLINOIS
DEPARTMENT OF AGRICULTURAL ECONOMICS

Location..... Number in family.....

1. What percent of all vegetables consumed are consumed as fresh vegetables?.....
What percent of fresh vegetables are purchased?.....
What percent of fresh vegetables do you grow?.....
What percent of your vegetable supply do you can?.....

2. What percent of the fresh vegetables do you purchase from:
store.....percent roadside market.....percent
street peddlers.....percent farmers.....percent

3. Can you tell whether you are getting home-grown vegetables or shipped-in vegetables? Yes..... No.....

4. Do you prefer home-grown vegetables to those shipped in? Yes..... No.....

5. What home-grown vegetables are available in your market in winter?
Cabbage..... Turnips.....
Carrots..... Parsnips.....

6. Do you eat freely of the following vegetables? Fresh or canned?

Tomatoes.....	Turnips.....
Cabbage.....	Onions, green.....
Celery cabbage.....	Onions, dry.....
Carrots.....	Sweet corn.....
Beets.....	Eggplant.....
Green beans.....	Squash.....
Peas.....	Pumpkin.....
Sweet potatoes.....	Cucumbers.....
Parsnips.....	Watermelons.....
Cauliflower.....	Muskmelons.....
Lettuce.....	Celery.....
Spinach.....	Rhubarb.....
Other greens.....	Asparagus.....
Peppers.....	Parsnips.....
Radishes.....	

POTATOES:

1. Do you purchase your potatoes by: year's supply.....; bag.....; bushel.....; peck.....; or smaller amounts.....?
Why?.....

2. What was your total consumption of potatoes last year?..... bushels.

3. Where do you buy your potatoes? Store.....; street peddler.....; roadside market.....; farmer.....

4. Do you buy home-grown potatoes when possible? Yes..... No..... Why?.....

5. What variety do you prefer?.....
Are they always available at reasonable price?.....

FRUITS:

1. What was amount of your consumption of each of following fruits in 1934:

Apples.....	Strawberries.....
Peaches.....	Blackberries.....
Cherries.....	Bananas.....
Pears.....	Oranges.....
Raspberries.....	Grapefruit.....

2. What percent of your fruit do you purchase from: store ..... percent; street peddler ..... percent; roadside markets ..... percent; farmers ..... percent.

3. How many quarts of fruit did you can last year? Apples .....; peaches .....; cherries .....; pears .....; strawberries .....; raspberries .....; blackberries .....; other fruits .....

4. Do you prefer home-grown fruit to that shipped in? Yes ..... No .....

5. Nationality of family .....

6. Appearance of home .....

II. RETAIL OF FRUIT AND VEGETABLES

UNIVERSITY OF ILLINOIS
DEPARTMENT OF AGRICULTURAL ECONOMICS

Store No. ..... Date .....
Commodity ..... Source .....
Retail unit ..... Retail price .....
Unit of purchase .....
Method of purchase .....
Quality: color, firmness, size, etc. .....
Percent defects: kind .....
Notes: .....

III. WHOLESALE OF LOCAL PRODUCE

UNIVERSITY OF ILLINOIS
DEPARTMENT OF AGRICULTURAL ECONOMICS

Product ..... Date .....
Quality ..... Grading .....
Container
Type .....
Volume .....
Price range .....
Unit of sale .....
Volume on market .....
Source .....

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